

ROZENBERG, Yu.A.; BAGANOV, V.M.; KUDRYAVTSEV, O.A.

Surface smoothness in machining gray iron. Izv.TPI 85:249-259  
'57. (MIRA 10:12)

1.Predstavлено prof. doktorom tekhn.nauk A.M. Rozenbergom.  
(Metal cutting) (Surfaces (Technology))

L 43540-65 EWP(k)/EWT(l)/EWT(m)/EWP(b)/EWP(t) Pf-4 JD  
ACCESSION NR: AR5009341 S/0276/65/000/002/B096/B096 20

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Sv. t., Abs. 2B620 B

AUTHOR: Rozenberg, A. M.; Rozenberg, Yu. A.; Kufarev, G. L.

TITLE: New functions from calculations of cutting forces in milling / 8

CITED SOURCE: Tr. Kuybyshevsk. aviat. in-t, vyp. 18, 1963, 78-92

TOPIC TAGS: milling, face cutter, cylindrical cutter, cutting force calculation, force component, peripheral force, torque, cutting power, feed pressure

TRANSLATION: The authors illustrate the derivation of equations expressing the process' components of cutting forces (i.e. peripheral force, torque, mean feed pressure, in the operation of a face cutter and (torque, peripheral force, cutting power) a cylindrical cutter. These equations are presented in the form of polynomials in which effects of various cutting process parameters are considered individually in relation to forces arising on the tool's leading and trailing surfaces. It was established that the effect of speed on cutting force in face milling is extensive and insignificant at fast and slow feeds, respectively. An increase in the diameter of a symmetrically positioned cutter, other conditions re-

Contd 1/2

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ACCESSION NR: AR5009341

maining constant, produces a significant reduction in peripheral force and a lesser drop in torque. Cutting power declines sharply when the diameter is increased at a constant cutting speed and it drops slowly when this increase takes place at constant rpm. Feed pressure declines as well when the diameter of a cutter is increased. The drop in peripheral force lags behind the increase in diameter of a cylindrical cutter, while torque increases slowly. Feed pressure drops in the operation of a face cutter when the angle in plane  $\beta$  is decreased. The change in feed pressure becomes significant when feed is intensified. Results of experimental verifications confirmed the correctness of the theoretical conclusions. Bibl. with 12 titles; 10 illustrations and 2 tables. L. Romancheva.

ENCL: .00

SUB CODE: IE

Card 2/2 M/B

L 43535-65 EWT(1)/EWT(m)/EWP(k)/EWP(b)/EWP(t) Pf-4 JD

ACCESSION NR: AR5009338

S/0276/65/000/002/B093/B094

16  
B

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Sv. t., Abs. 2B605

AUTHOR: Rozenberg, Yu. A.

TITLE: Problems on the mechanics of cutting metals of low plasticity

CITED SOURCE: Tr. Kuybyshevsk. aviat. in-t, vyp. 18, 1963, 93-102

TOPIC TAGS: continuous chip, discontinuous chip, kinematic relative shear, initial metal hardness, ultimate hardenability factor, primary force calculation, metal cutting, low plasticity metal

TRANSLATION: Completed studies have established that in cutting metals of low plasticity, the tangential stress in the plane of terminal shear is proportional to the initial hardness of the material multiplied by the coefficient of maximum hardenability. The development of a discontinuous chip consists of plastic deformation of the chip and subsequent brittle shear (spalling). The area of strain propagation in the metal is not limited by the surface of terminal shear of the chip element. Terminal brittle shear of the chip element occurs along a sur-

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face where the particles of metal are subject to maximum ultimate deformation and maximum ultimate hardening, governed by the properties of the metal and independent of the geometry of the tool. Either a continuous or a discontinuous chip forms in the process of removing metal. The nature of the chip depends on the depth of the cut and on the ratio of kinematic relative shear  $\epsilon_{\beta_1}$  to the maximum value of relative shear  $\epsilon_M$  acting on the metal. A discontinuous chip forms when  $\epsilon_{\beta_1} > \epsilon_M$ , a continuous chip forms when  $\epsilon_{\beta_1} \leq \epsilon_M$ . The angle of repose  $\gamma$ , the angle of shear  $\beta_1$  and the back rake angle  $\gamma'$  remain in the same relationship to the magnitude of kinematic shear  $\epsilon_{\beta_1}$  during the process of material removal. A procedure was evolved for calculating the major force component on the tool's leading surface while cutting metal of low plasticity from values of initial hardness of the metal, from the ultimate hardenability factor and from chip shrinkage. Bibl. with 9 titles; 6 illustrations. L. Tikhonova.

SUB CODE: MM, IE

ENCL: 00

Card 21210

L 43540-65 EWP(k)/EWT(l)/EWT(m)/EWP(b)/EWP(t) Pt-l JD  
ACCESSION NR: AR5009341 S/0276/65/000/002/B096/B096

20

B

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Sv. t., Abs. 2B620

AUTHOR: Rozenberg, A. M.; Rozenberg, Yu. A.; Kufarev, G. L.

TITLE: New functions from calculations of cutting forces in milling 18

CITED SOURCE: Tr. Kuybyshevsk. aviat., in-t, vyp. 18, 1963, 78-92

TOPIC TAGS: milling, face cutter, cylindrical cutter, cutting force calculation, force component, peripheral force, torque, cutting power, feed pressure

TRANSLATION: The authors illustrate the derivation of equations expressing the processing components of cutting forces (i.e. peripheral force, torque, mean feed pressure) in the operation of a face cutter and (torque, peripheral force, cutting power) a cylindrical cutter. These equations are presented in the form of polynomials in which effects of various cutting process parameters are considered individually in relation to forces arising on the tool's leading and trailing surfaces. It was established that the effect of speed on cutting force in face milling is extensive and insignificant at fast and slow feeds, respectively. An increase in the diameter of a symmetrically positioned cutter, other conditions re-

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L 43540-65

ACCESSION NR: AR5009341

maining constant, produces a significant reduction in peripheral force and a lesser drop in torque. Cutting power declines sharply when the diameter is increased at a constant cutting speed and it drops slowly when this increase takes place at constant rpm. Feed pressure declines as well when the diameter of a cutter is increased. The drop in peripheral force lags behind the increase in diameter of a cylindrical cutter, while torque increases slowly. Feed pressure drops in the operation of a face cutter when the angle in plane  $\rho$  is decreased. The change in feed pressure becomes significant when feed is intensified. Results of experimental verifications confirmed the correctness of the theoretical conclusions.  
Bibl. with 12 titles; 10 illustrations and 2 tables. L. Romancheva.

SUB CODE: IE

ENCL: 00

Card 2/2 MB

L 6674-65 EWT(1)/EWT(m)/EPH/T/EWP(a)/EWP(b)/EED(b)-3 Ps=1/Pae=2 IJP(c)/  
AEDC(b)/AFWL/SSD/AFETR/ASD(z)-5/AFMD(f)/BSD/ESD(gs)/ESD(t)/RAEM(t) MJW/JD  
ACCESSION NR: AR4036008 S/0276/64/000/003/B106/B106

76

SOURCE: Ref. zh. Tekhnol. mashinostr. Sv. t., Abs. 3B531

AUTHOR: Rozenberg, Yu. A., Filipchenko, I. B.

TITLE: Study of the process of cutting metal with the use of motion picture photography

CITED SOURCE: Izv. Tomskogo politekhn. in-ta, v. 107, 1963, 35-42

TOPIC TAGS: metalworking, metal cutting, lathe machining, plastic deformations, displacement, chip formation, photography, motion picture photography, high speed photography

TRANSLATION: Motion picture study of the process of cutting was made both during the machining of brittle metals (grey iron, malleable iron, and LS-53-1 bronze), and plastic metals (45 and 20 Kh steels, copper, and aluminum alloy) on a lathe. A type SKS-1 high-speed movie camera was used, which allowed photography at a speed of up to 6,300 frames/second. The lighting was made with three spotlights for photography on panchromatic film type DN with a film speed of 5,000-5,500 frames/second, with exposure time of 0.00004-0.000038 seconds. High-speed cutters with angle  $\gamma$  of from

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ACCESSION NR: AR4036008

plus 30 to minus 11 degrees were used in the experiments. The width of the cut varied from 0.1 to 1 mm. The motion picture photography of the process of cutting aluminum alloy made it possible to determine an outcropping on the cutter, which had a peculiar form, and lowered the Y angle of the cutter, as a result of which, the force of cutting increased. High-speed motion picture photography was used to photograph the process of outcropping growth. The results of the experiment made it possible to determine that the process of chip-formation in machining brittle metals is a process of plastic deformation of displacement.

DATE

SUB CODE: MM

ENCL: 00

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ROZENBERG, Yu.A.

Evaluation of antiseizing properties of lubricating oils.  
Standartizatsiia 27 no.4:35-40 Ap '63. (MIRA 1684)  
(Lubrication and lubricants—Testing)

ROZENBERG, Yuryi Aleksandrovich; VINOGRADOVA, Irina Ernestovna; LEVINA,  
Ye.S., vedushchiy red.; FEDOTOVA, I.G., tekhn.red.

[Lubrication of machinery mechanisms; selection and use of  
lubricating oils] Smazka mekhanizmov mashin; vybor i primenenie  
masel. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi  
lit-ry, 1960. 339 p. (MIRA 14:2)  
(Lubrication and lubricants)

ROZENBERG, Yu.A.

Methods for determining wear-preventing properties of lubricants.  
Standartizatsiia 24 no.12:43-45 D '60. (MIRA 13:11)  
(Lubrication and lubricants--Standards)

ROZENBERG, A.M.; KUFAREV, G.L.; ROZENBERG, Yu.A.

Dynamometer for the measurement of torques during milling. Izm.  
tekhn. no.8:13-15 Ag '60. (MIRA 13:9)  
(Dynamometer)

S/115/60/000/008/004/013  
B019/B063

AUTHORS: Rozenberg, A. M., Kufarev, G. L., Rozenberg, Yu. A.

TITLE: A Dynamometer for Measuring Torques in Milling

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 8, pp. 13-15

TEXT: The dynamometer described in the present paper was designed at the Tomskiy politekhnicheskiy institut (Tomsk Polytechnic Institute). Its rigid construction excludes any vibrations, it has a quick response, records any change in the cutting power, and is sufficiently sensitive. It consists essentially of two disks which are connected by ribs. The rigidity of this dynamometer depends on the number and thickness of these ribs. The ribs are deformed during the power transmission between the two disks, one of which is fastened to a spindle, while the other has a cone for fastening the miller. The deformation and the torque transmitted are measured by two inductive transmitters housed within the dynamometer. Each transmitter has a coil with a core of Armco iron. They are built in such a way that the air gap of one transmitter is narrowed down when the air gap between the core and the armature of the other transmitter

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A Dynamometer for Measuring Torques in Milling S/115/60/000/008/004/013  
B019/B063

extends. The two transmitters are connected with two equal circuits. Before the operation begins, the currents of the two circuits are equally adjusted by means of two potentiometers. Due to changes of the air gaps, different amperages currents occur in the two circuits during the operation. The difference is recorded by a measuring instrument. This dynamometer has stood the test: It is very reliable in operation, recording is stable, and there are no vibrations. The recorded amperage is linearly dependent on the torque. There are 2 figures.

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12(2)

SOV/113-59-5-3/21

AUTHOR: Rozenberg, Yu. A., Candidate of Technical Sciences

TITLE: The Lubrication of Automobile Hypoid Gears

PERIODICAL: Avtomobil'naya promyshlennost', 1959, Nr 5, pp 6 - 11  
(USSR)

ABSTRACT: The application of hypoid gears in new Soviet automobiles instead of the formerly used spiral bevel gear presents lubrication problems, since the work of the hypoid gear in the rear axle depends to a greater extent on the lubrication than that of the spiral bevel gear. After explaining the differences in the lubrication requirements between the two gear types, the author reviews American and British experience in this field referring to the US Army specification MIL-L-2105. There are 2 diagrams, 3 photographs, 2 graphs, 3 tables and 10 Soviet references.

ASSOCIATION: VNII NP

Card 1/1

SOV/121-58-8-13/29

AUTHORS: Rozenberg, A.M., Rozenberg, Yu.A., and Kozhevnikov, D.V.

TITLE: Methods of Sharpening of Twist Drills (Metody zatochki spiral'nykh sverl)

PERIODICAL: Stanki I Instrument, 1958, Nr 8, p 31 (USSR)

ABSTRACT: Tests are reported, conducted at the Machine Tool and Metal Cutting Department Laboratory of the Tomsk Polytechnic Institute imeni S.M.Kirov, which are concerned with the behaviour of twist drills sharpened along either the conical or the helical surface or the flats. R9 and R18 high speed steel (non-cyanided) twist drills of 17, 19 and 28 mm diameter, manufactured by the Tomsk Tool Works (Tomskiy Instrumental'nyy Zavod) were tested. Drills both with milled flutes and twisted from flat stock were used with emulsion cooling in drilling type 40 steel (Brinell hardness 180-210) and 40 Kh steel (Brinell hardness 250-260). Optimum conditions for long endurance, as previously determined, were applied. The criterion of wear was a screeching noise and waviness of the hole bottom. The cutting forces were measured by a drill dynamometer with an inductive transmitter. The results of the type 40

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Methods of Sharpening of Twist Drills

SOV/121-58-8-13/29

steel tests are listed in a Table. Figs 1 and 2 show the axial force or drilling torque, respectively, plotted against the advance per revolution. It is shown that sharpening drills along the helical surface reduces the axial force by 30% compared with drills sharpened along the conical surface. Drills sharpened along the flats yield results similar to those sharpened along the conical surface. The drilling torque is almost independent of the method of sharpening. The effect of sharpening along the helical surface is explained by the pronounced reduction of the front clearance angle at the cutting edge from a negative value of  $60^\circ$  to a negative value of  $17^\circ$ . Similar results have been obtained for both carbon and alloy steels.

There are 2 figures and 1 table.

Card 2/2

RODINOV, I.V.; ROZENBERG, Yu.A.; KARMINSKIY, V.N.

Investigating reamers for upraise mining. Izv. TPI 106:193-212 '58.  
(MIRA 11:11)

(Mining engineering)

(Reamers)

SOV/124-58-7-8204

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 123 (USSR)

AUTHORS: Rozenberg, A. M., Rozenberg, Yu. A.

TITLE: The Effect of the Deformation Rate and Temperature on the Stresses Occurring During the Cutting of Brittle Metal (Vliyaniye skorosti deformatsii i temperatury na napryazheniye pri rezanii khrupkogo metalla)

PERIODICAL: Izv. Tomskogo. politekhn. in-ta, 1954, Vol 75, pp 47-55

ABSTRACT: Experiments showed that for cast iron subjected to cutting the calculated tangential stresses present in the shear plane (which are equal to those observed when cast-iron specimens were subjected to compression) are functions of the hardness of the metal but are almost independent of the deformation rate. The temperature in the shear zone depends on the amount of heat liberated per unit metal volume; it is related to the angle of shear and varies as a function of the hardness of the iron. The effect of the temperature on the hardness during cutting is insignificant, for which reason the effect of the temperature on the stresses can likewise be expected to be insignificant.

P. S. Pautynskiy

1. Metals--Deformation 2. Metals--Stresses 3. Metals--Temperature factors 4. Cutting tools--Performance

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CIA-RDP86-00513R001445610015-4

ROZENBERG, A.M.; ROZENBERG, Yu.A.; KOZHENVNIKOV, D.V.

Methods for grinding spiral drills. Stan. i instr. 29 no. 8;31  
(MIRA 11;8)  
Ag '58.  
(Grinding and polishing)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001445610015-4"

GONTOVENKO, N.P.; ROZENBERG, Yu.G.; ZAMALIN, P.S.; TSUKERMAN, S.I.;  
GONTARENKO, I.F.; SYTNYANSKIY, V.D.; MARKMAN, L.L.

Smelting of pig iron in a coke gas cupola furnace. Prom. energ.  
15 no.8:14-16 Ag '60. (MIRA 15:1)

(Cupola furnaces)  
(Coke-oven gas)

18(5)

SOV/19-58-11-271/549

AUTHORS: Rozenberg, Yu.G., Tsukerman, S.I., Zamalin, P.S., Gontovenko, N.P., Sytnyanskiy, V.D., Gantorenko, I.R., and Markman, L.L.

TITLE: A Cupola Utilizing Natural Gas Together with Coke  
(Vagranka s ispol'zovaniyem prirodnogo gaza vmeste  
s koksom)

PERIODICAL: Byulleten' izobreteniy, 1958, Nr 11, p 62 (USSR)

ABSTRACT: Class 31a, 1<sub>50</sub>. Nr 115869 (597964 of 21 April 1958). A ring-shaped gas collector mounted above the tuyere belt of a cupola, and two-way gas burners with a stopper needle combined with a refractory channel in the cupola lining, for burning natural gas in addition to coke in cupola process, to spare coke.

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SOV/128-58-11-8/24

AUTHORS: Noskov, B.A., Rozenberg, Yu.G., Tsukerman, S.I., Den'gin, I.N.

TITLE: A Coke-Gas Cupola Furnace (Koksogazovaya vagranka)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 11, pp 14-15 (USSR)

ABSTRACT: The use of natural gas in cupola smelting leads to reduced coke expenses. Experiments carried out at the Khar'kovskiy elektromekhanicheskiy zavod (Khar'kov Electromechanical Plant) proved that the successful use of gas and coke depends on proper gas burning conditions, i.e. on the design of burners and their position in the cupola. It was stated that good results can be obtained by placing the burners above the tuyeres. Further investigations will be concentrated on determining the optimum dimensions of the distance between the burner axes and the tuyeres. The information includes a description of a cupola where normal conditions for gas burning and reduced coke expenses were obtained by reducing the number of tuyeres from 6 to 4. A new improved

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A Coke-Gas Cupola Furnace

SOV/128-58-11-8-24

cupola design, now being installed, will make possible a further reduction in coke expense by a change in air distribution. There are 3 diagrams and 1 photo.

1. Blast furnaces--Equipment
2. Blast furnaces--Operation
3. Natural gas--Performance

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18(5)

SOV/128-59-7-12/25

AUTHOR: Tsukerman, S.I., and Rozenberg, Yu.G., Engineers

TITLE: Coke-Gas Cupola Furnace

PERIODICAL: Liteynoye Proizvodstvo, 1959, Nr 7, pp 28-31 (USSR)

ABSTRACT: Experience gathered while working with coke-gas cupola furnaces (according to Liteynoye Proizvodstvo 1958, Nr 11) furnished practical data permitting some improvements and comparisons with the work of commonly used coke heated cupola furnaces. Already 5 coke-cupola furnaces work at the foundry of the Plant KhEMZ. (The Sovnarkhozes of Kharkov and Rostov have put such furnaces into operation). The test work had been concentrated on the complete combustion of the natural gas, on the operation of the gas burner, on the temperature of the cast iron and of the exhaust gases, on the chemical analysis and the mechanical properties of the cast iron, and on the slag of the cupola furnace. They had been done under the super-

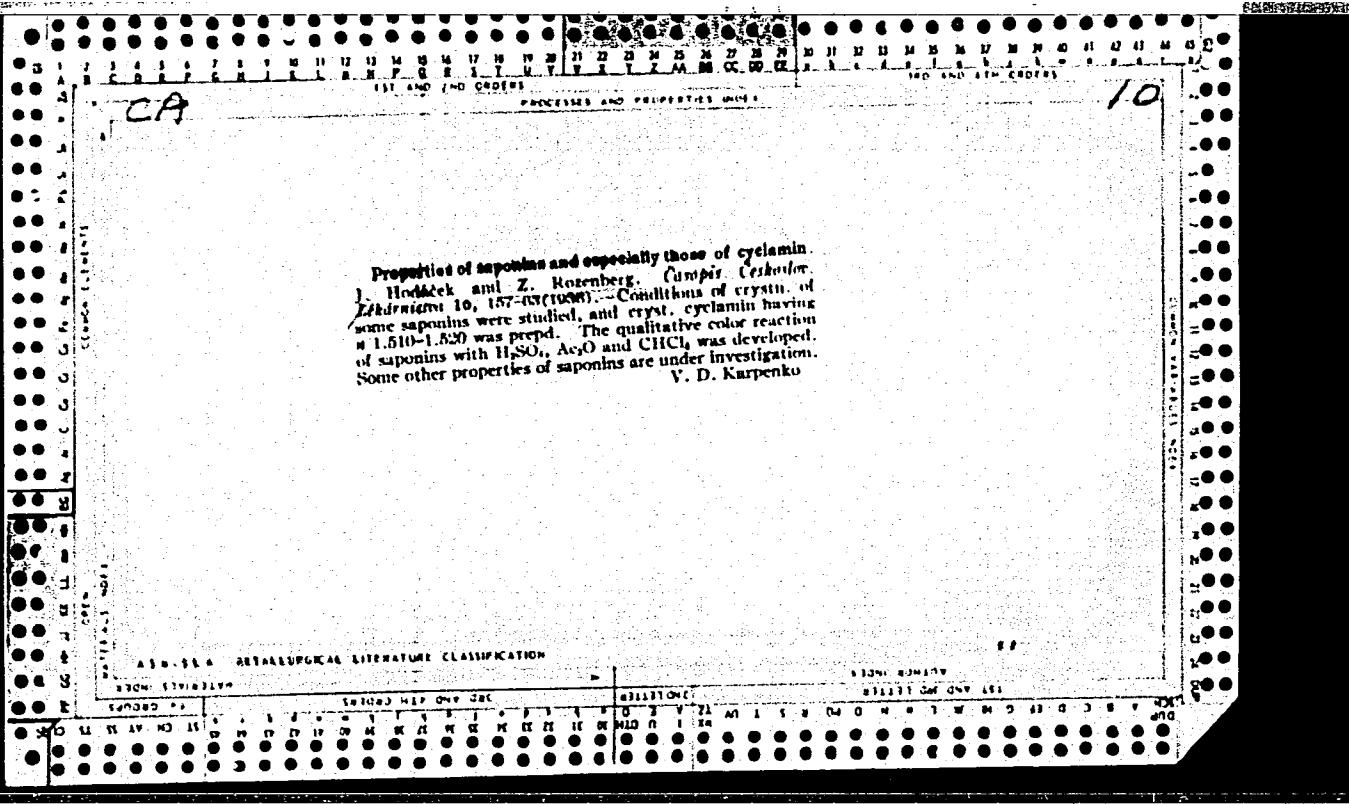
Card 1/2

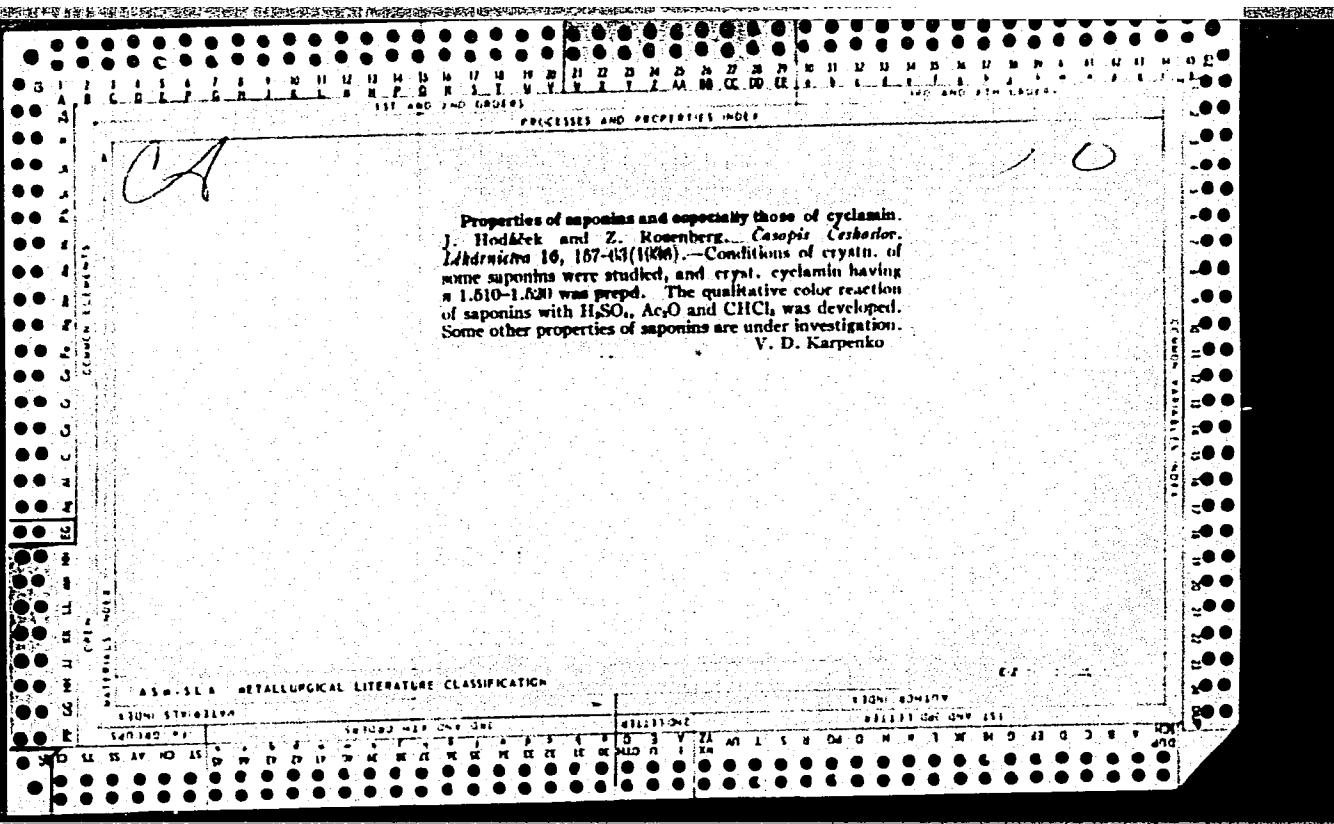
SOV/128-50-7-12/25

Coke-Gas Cupola Furnaces

vision of P.A. Noskov, Candidate of Technical Sciences. An important factor of the melting process is the position of the gas burner at the cupola furnace (about in 700 to 800 mm distance). Four tables publish the results of the experiments made with both types of cupola furnaces. The results have confirmed the advantages of the coke-gas type furnace. Six month after putting into operation the new cupola furnace at the Plant KREMZ already 700 tons of coke, 230 tons of limestone, 160 tons of refractory bricks, more than 30,000 cubic meters of oxygen, and 250 standard working hours had been saved. Semi-annual net savings: 250,000 rubles. There are 4 tables, 5 diagrams and 4 Soviet references.

Card 2/2





BRAKSS, Akots; ROZENBERGA, R., red.; PILADZE, Z., tekhn. red.

[Labor productivity as the main index of progress in agriculture] Darba razigums-galvenais izaugsmes radi-tajs lauksaimnieciba. Riga, Latvijas PSR Zinatnu Akad. izd-ba, 1962. 73 p. (MIRA 17:1)

LIEPINS, Janis; ROZENBERGA, R., red.

[How to eat] Ka est. Riga, Latvijas PSR Zinatnu akad.  
izd.-ba, 1964. 52 p. [In Latvian] (MIRA 17:6)

KUKAINE, Rita; JAKOBSONS, Julljs; ROZENBLUMGA, R., red.

[Vitamins and their sources in nature] Vitamini un to  
avoti daba. Riga, Latvijas PSR Zinatnu akad. izd-ha,  
1963. 75 p. [In Latvian] (MIRA 17:6)

REIZINS, Rudolfs; ROZENBERGA, R., red.

[A sheet of paper talks about itself] Papira lapa stasta  
per sevi. Riga, Latvijas PSR Zinatnu akad. izd-ja, 1963.  
95 p. [In Latvian] (MIRA 17:6)

KOPYLOVA, Margarita Konstantinovna; ROZENBERGA, R., red.; OZOLINA, A.,  
tekhn. red.

[Pneumonia in infants] Plausu karsonis mazbernu vecuma. Riga,  
Latvijas PSR Zinatnu akademijas izdevnieciba, 1962. 25 p.  
(MIRA 16:5)

(PNEUMONIA) (INFANTS--DISEASES)

MAZURS, Juris; ROZENBERGA, R., red.; BOKMANIS, R., tekhn. red.

[Prospects for the development of power engineering in the  
U.S.S.R. and Latvian S.S.R.] PSRS un Latvijas PSR energeti-  
kas attistibas perspektivas. Riga, Latvijas PSR Zinatnu akad.  
izdevnieciba, 1962. 61 p.  
(Power engineering)

ZIKMANE, Vita; ROZENBERGA, R., red.; LEMBERGA, A., tehn, red.

[Tuberculosis and the way of life] Tuberkuloze un dzives  
veids. Riga, Latvijas valsts izd-va, 1962. 55 p.  
(MIRA 17:2)

BRAKSS, Akot; ROZENBERGA, R., red.; PILADZE, Z., tekhn. red.

[Labor productivity as a principal index of agricultural development] Darba rāzīgums - galvenais izaugsmes radītājs lauksaimniecība. Riga, Latvija, Zinatnu Akademijas izdevniecība, 1962. 73 p. (MIRA 16:5)  
(Agriculture--Labor productivity)

ROZE, Karlis, kand. sel'khoz. nauk; SOVERS, Ernests, agronom; EIHE, E., retsenzent; GRINBLATS, G., kand. sel'khoz. nauk, agronom, retsenzent; KIRYSIS, K., retsenzent; ROZENBERGA, R., red.; BOKMANIS, R., tekhn. red.

[Increasing the yield of pulse crops in the Latvian S.S.R.]  
Paksaugu razibas kapinasana Latvijas PSR. Riga, Latvijas  
PSR Zinatnu akademijas izdevnieciba, 1962. 74 p.

(MIRA 16:6)

1. Latvijas Padomju Savienibas Republikas Zinatnu akademijas korespondentajloceklis(for Eihe). 2. Latvijas Lopkopibas un veterinarijas instituta zinatniskas petniecibas saimniecibas "Krimulda" priekssedetajs (for Kirsis).

(Latvia—Legumes)

ANDRUSAITE, Ruta; ROZENBERGA, R., red.; CHERNOBROVA, L., tekhn.  
red.

[Antibiotics in the feeding of domestic animals] Antibiotiskas  
vielas majdzivnieku edinasana. Riga, Latvijas PSR ZA izdevnie-  
ciba, 1963. 39 p.  
(Antibiotics) (Latvia—Feeding)

MOTE, Gunta; ROZENBERGA, R., red.; PILADZE, Z., tekhn. red.

[Selection of the parameters of high-voltage fuses] Augst-sprieguma drosinataju kustoso ieliktnu parametru izvele.  
Riga, PSR Zinatnu akademijas izdevnieciba, 1961. 33 p.

(MIRA 15:3)

(Electric fuses)

ZIKMANE, Vita; ROZENBERGA, R., red.; LEMBERGA, A., tekhn. red.

[Tuberculosis and mode of living] Tuberkuloze un dzives  
veids. Riga, Latvijas PSR Zinatnu akad. izdevnieciba,  
1962. 55 p. (MIRA 16:5)

(TUBERCULOSIS)

BERGMANIS, J., otv. red.; BRAKSS, A., red.; ZENGIEKS, J., kand. ekonom.  
nauk, red.; ROZENBERGA, R., red.; LEMBERGA, A., tekm. red.

[Agricultural economics] Lauksaimniecibas ekonomika. Riga,  
Latvijas PSR Zinatnu akad. izdevnieciba, 1961. 108 p.

(MIRA 15:3)

1. Latvijas PSR Zinatnu akademija. Ekonomikas instituts.
2. Chlen-korrespondent Akademii nauk Latviyskoy SSR (for Bergmanis).

(Latvia--Agriculture--Economic aspects)

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CIA-RDP86-00513R001445610015-4

BRAKSS, Nikolajs; ROZENBERGA, R., red.; PILADZE, K., tekhn. red.

[Swamps and peat] Purvi un kudra. Riga, Latvijas PSR Zinatnu  
akademijas izdevnieciba, 1961. 90 p. (MIRA 15:3)  
(Latvia—Peat bogs)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001445610015-4"

ROZE, Karlis, kand. sel'khoz. nauk; ROZENBERGA, R., red.; LEMBERGA, A.,  
tekhn. red.

[New varieties of potatoes] Jaunas kartupelu skirnes. Riga,  
Latvijas PSR Zinatnu akad. izdevnieciba, 1961. 57 p.  
(MIRA 15:3)

(Potatoes—Varieties)

BRAKSS, Akots; ROZENBERGA, R., red.; BITARS, A., tekhn. red.

[Mechanization of work on livestock farms, its economic effectiveness and prospects on collective farms of the Latvian S.S.R.] Lopkopibas darba procesu mehanizacija, tas ekonomiska efektivitāte un perspektivas Latvijas PSR kolhozos. Riga, Latvijas PSR Zinatnu akad. izdevniecība, 1961. 167 p.

(MIRA 15:3)

(Latvia—Stock and stockbreeding)

(Latvia—Farm mechanization)

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001445610015-4

ALKSNIS, Andrejs; ROZENBERGA, R., red.; KREMEKE, L., tekhn. red.

[Stars and nebulae] Zvaigznes un miglaji. Riga, Latvijas  
PSR Zinatnu akademijas izdevnieciba, 1961. 96 p.  
(MIRA 15:3)

(Stars) (Nebulae)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001445610015-4"

VITENBERGS, Guntis; GRANTS, Elmars; ROZENBERGA, R., red.; LEMBERGA, A.,  
red.

[Is the incidence of cancer increasing?] Vai saslimstiba ar vezi  
klust biezaka? Riga, LPSR Zinatnu akademijas izdevnieciba,  
1961. 42 p.

(MIRA 15:2)

(LATVIA--CANCER)

BASE-SADHANE, Hava; ROZENBERGA, R., red.; LEMBERGA, A., tekhn. red.

[Significance of microelements in nutrition] Mikroelementu  
nozīme uztura. Riga, Latvijas PSR Zinatnu akad. izdevniecība,  
(MIRA 15:2)  
1963, 59 p.  
(Trace elements in the body) (Nutrition)

ROZENBERGER, B.F.; FOMIN, N.V.

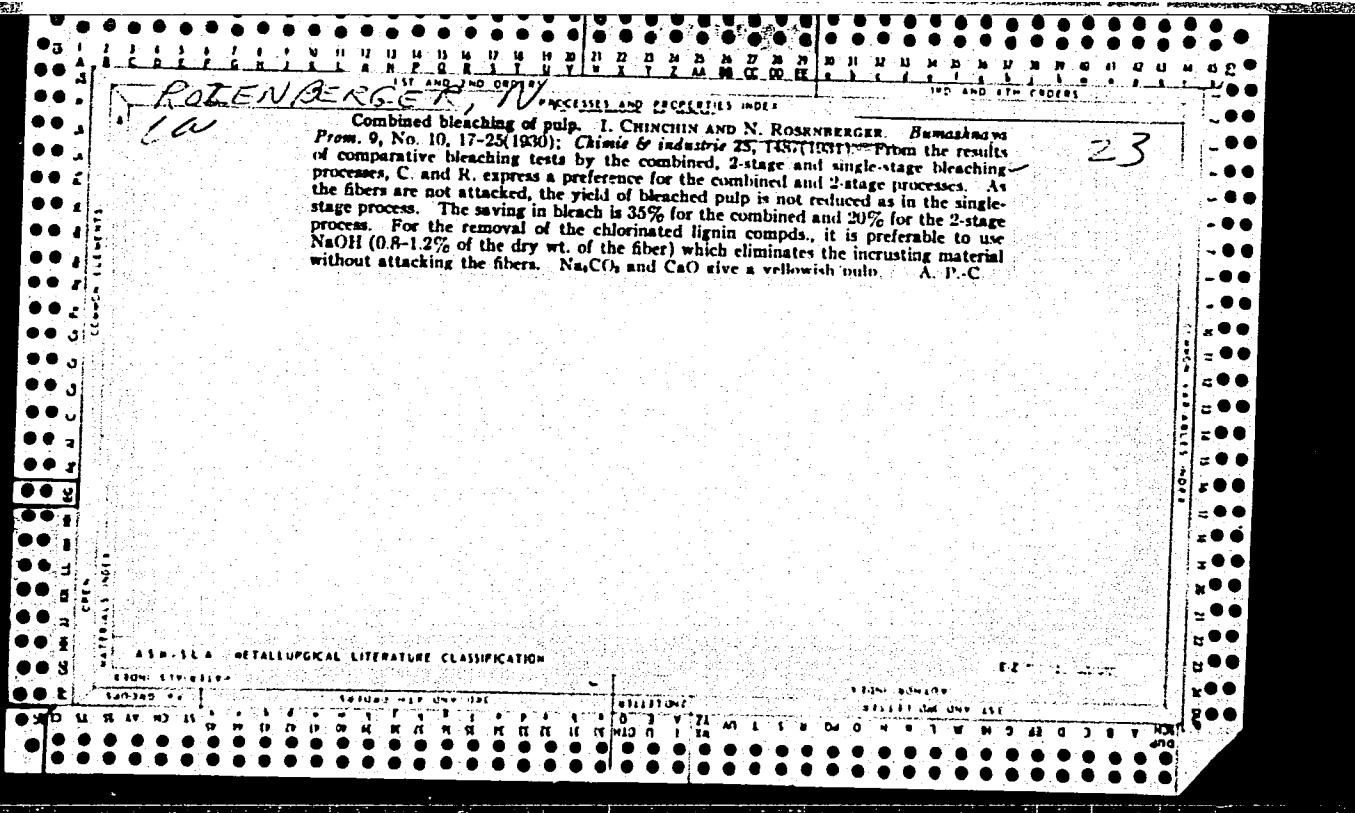
Use of command electropneumatic instruments for the automation  
of operations of intensified ice makers. Izv.vys.ucheb.zav.;  
pishch.tekh. 2:109-113 '62. (MIRA 15:5)

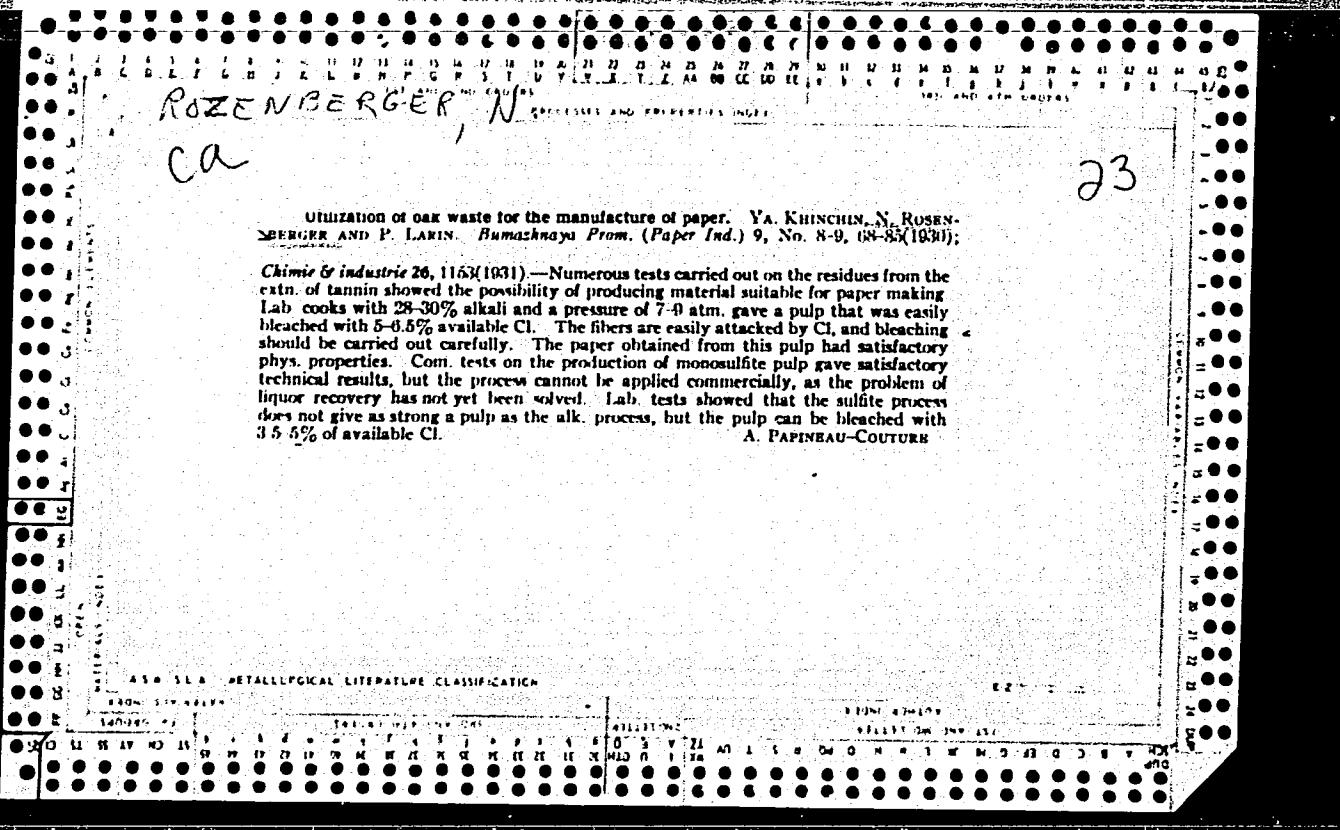
1. Leningradskiy tekhnologicheskiy institut kholodil'noy  
promyshlennosti, kafedra elektrotekhniki.  
(Ice—Manufacture) (Automatic control)

AMATUNI, Napoleon Leonovich, dots.; DANDINSKIY, Sergey Ivanovich,  
dots.; DREVS, Georgiy Vyacheslavovich, dots.; IL'IN,  
Boris Vladimirovich, dots.; KNORRING, Gleb Mikhaylovich,  
kand. tekhn.nauk; PASECHNIK, Stepan Yakovlevich, prof.;  
PREOBRAZHENSKIY, Aleksay Alekseyevich, dots.; ROZENBERGER,  
Boris Fedorovich, dots.; SOLOV'YEV, Vladimir Ivanovich,  
dots.; YASTREBOV, Petr Parfen'yevich, prof.; BELOVIDOV,  
B.S., doktor tekhn.nauk, prof., retsentent; ARTEMOVA, T.I.,  
red. izd-va; TUPITSINA, L.A., red. izd-va; SHVETSOV, S.V.,  
tekhn. red.

[Electrical engineering and electric equipment] Elektrotekhnika i elektrooborudovanie; obshchii kurs. [By] N.L. Amatuni  
i dr. Moskva, Rosvuzizdat, 1963. 646 p. (MIRA 16:9)

1. Novocherkasskiy politekhnicheskiy institut (for Belovidov).  
(Electric engineering--Handbooks, manuals, etc.)  
(Electric apparatus and appliances--Handbooks, manuals, etc.)





Rosenberger, N.A.

K-5

RUMANIA/Chemical Technology - Chemical Products and Their  
Applications: Cellulose and Cellulose  
Products, Paper.

Abs Jour : Ref Zhur - Khimiya, No 2, 1958, 659<sup>4</sup>

Author : N.A. Rosenberger

Inst :  
Title : Certain Problems of the Theory and Practice of Accelerated  
Sulfate Pulping.

Orig Pub : An. Rom.-Sov. Ser. silvicult.-ind. lemn. si hirt., 1954,  
8, No 4, 87-99

Abstract : Translation.  
See RZhKhim, 1957, 360<sup>49</sup>.

Card 1/1

ROZENBERGER, N.A.

Pulp for strong viscose fibers. Sum. prom. 34 no.5:2-4 My '59.  
(MIRA 12:6)

1.TSentral'nyy nauchno-issledovatel'skiy institut tsellyuloznay  
i bumazhnay promyshlennosti.  
(Woodpulp) (Viscose)

ROZENBERGER, N. A.; NAPKHANENKO, Z. S.; Prinimala uchastiye: PETROVA,  
V. K., nauchnyy sotrudnik

Active acidity in sulfite cooking. Trudy VNIIIB no.47:10-37  
'61. (MIRA 16:1)

(Woodpulp—Testing)

ROZENBERGER, N.A.

Semic~~h~~emical woodpulp for the manufacture of corrugated container  
board and the protein yeast. Bum.prom. 37 no.12:26-29 D '62.  
(MIRA 16:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsellyulozno-  
bumazhnay promyshlennosti.  
(Woodpulp industry--By-products) (Yeast) (Paper)

ROZENBERGER, N.A.; Prinimali uchastiye: NAPKHANENKO, Z.S.; PETROVA, V.K.

Rapid sulfite cooking operation. Bum. prom. 36 no.12:3-7 D '61.  
(MIRA 15:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tselyuloznobumazhnay promyshlennosti.  
(Sulfites)

ROZENBERGER, N.A.; ONOKHIN, I.P.; KOPANTSEV, M.M.

Semicomical sulfite pulp for corrugated paperboard.  
Bum.prom. 35 no.6:14-15 Je '60. (MIRA 13:7)  
(Woodpulp) (Paperboard)

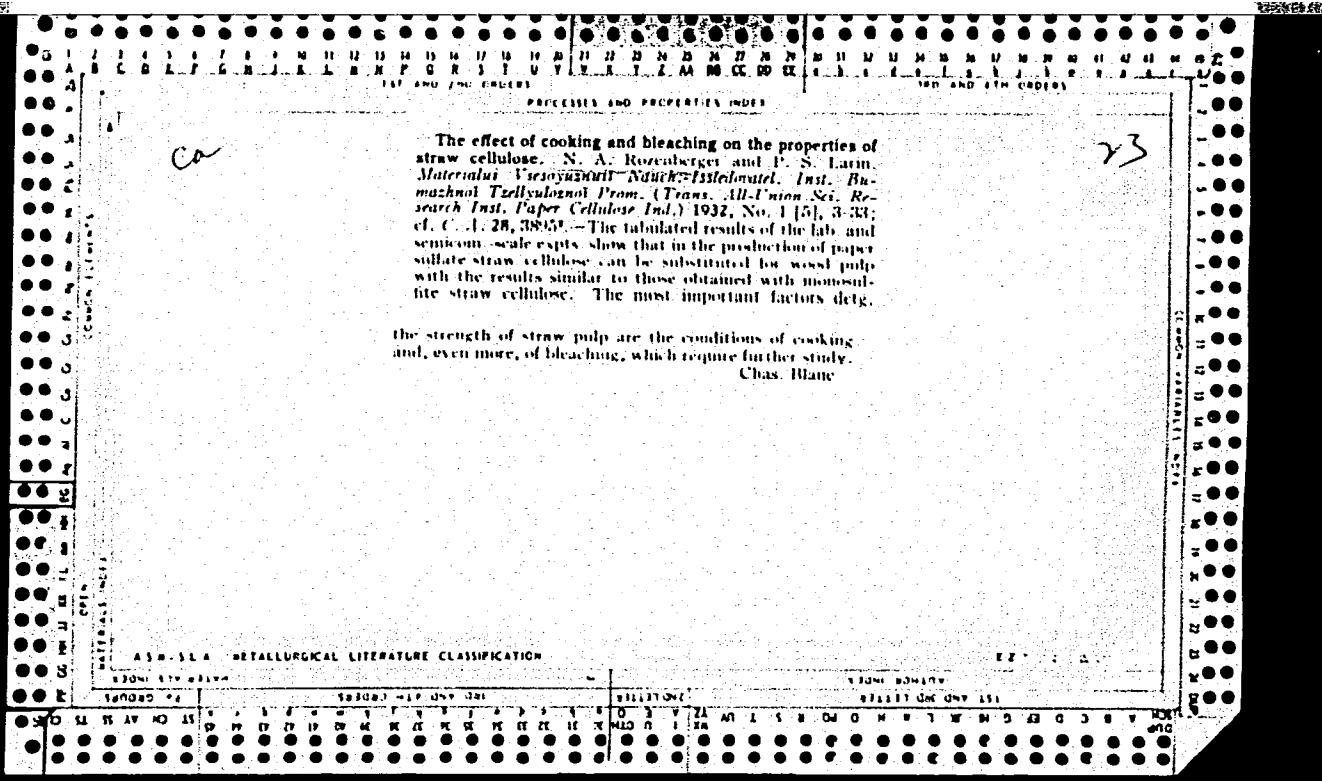
ROZENBERGER, N.A.; ONOKHIN, I.P.; KOPANTSEV, M.M.

Sulfite semichemical pulp for corrugated paperboard. Bum.  
prom. 35 no.5:5-7 My '60. (MIRA 13:7)  
(Woodpulp) (Paperboard)

ROZENBERGER, N.A.; NAPKHANENKO, Z.S.

Sulfite cooking in the presence of phenol. Bum.prom. 34  
no.10:2-5 O '59. (MIRA 13:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut tsellyuloznay  
i bumazhnay promyshlennosti.  
(Sulfite liquor)

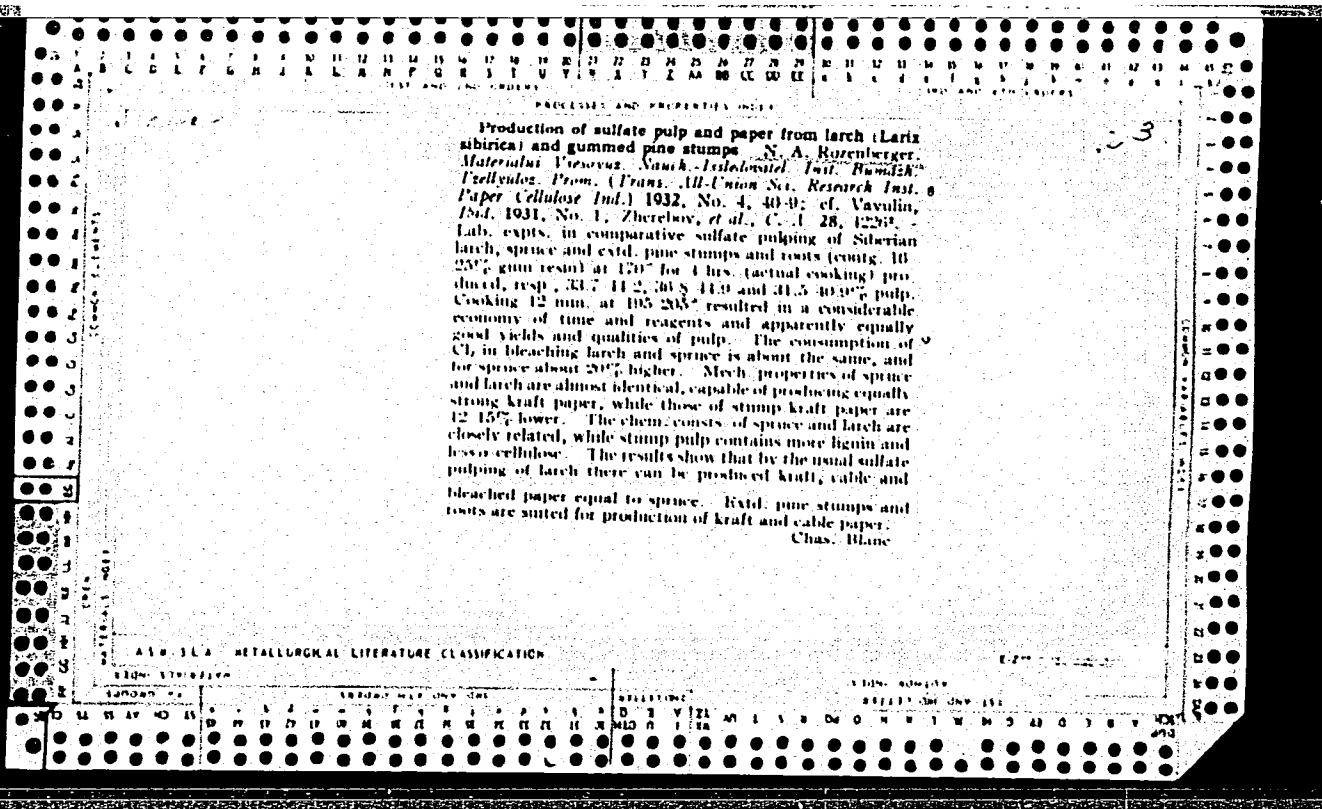


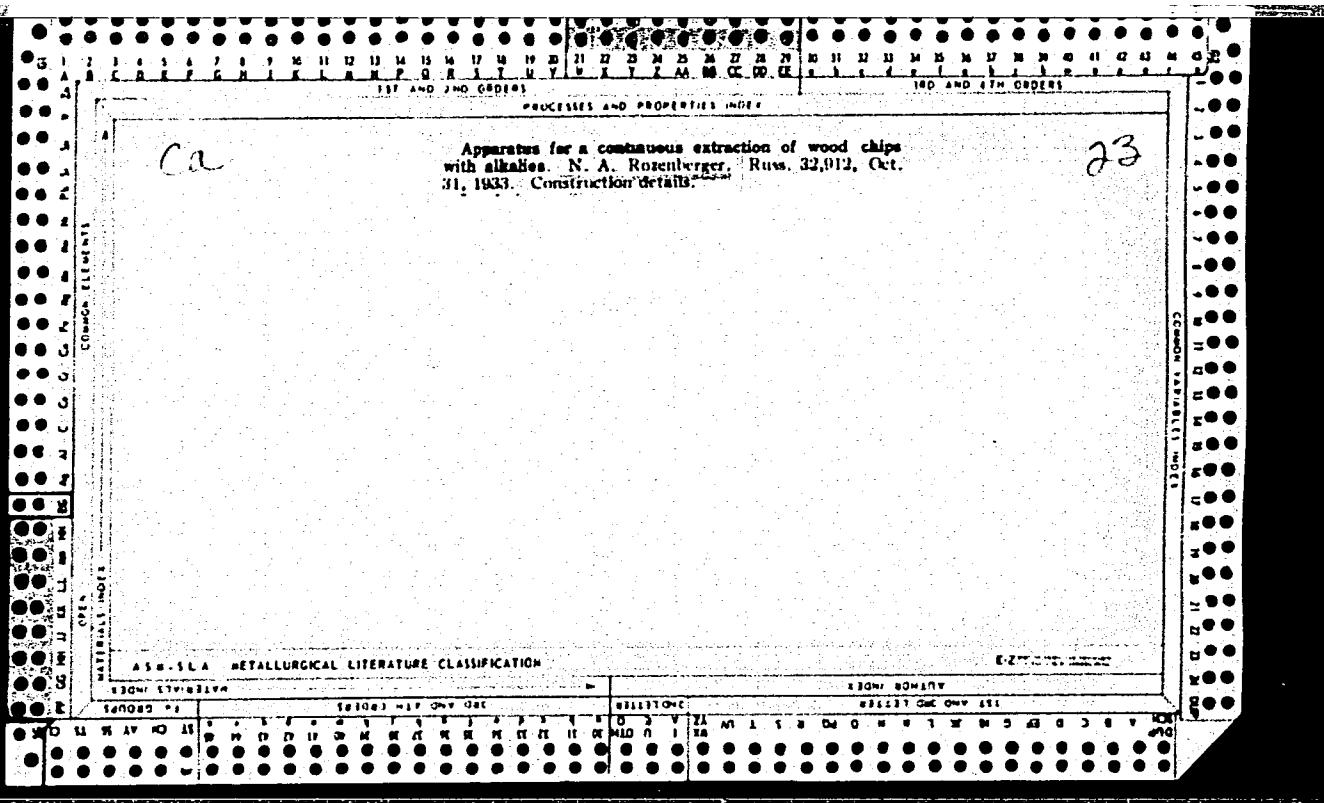
132-100-188 (1948)

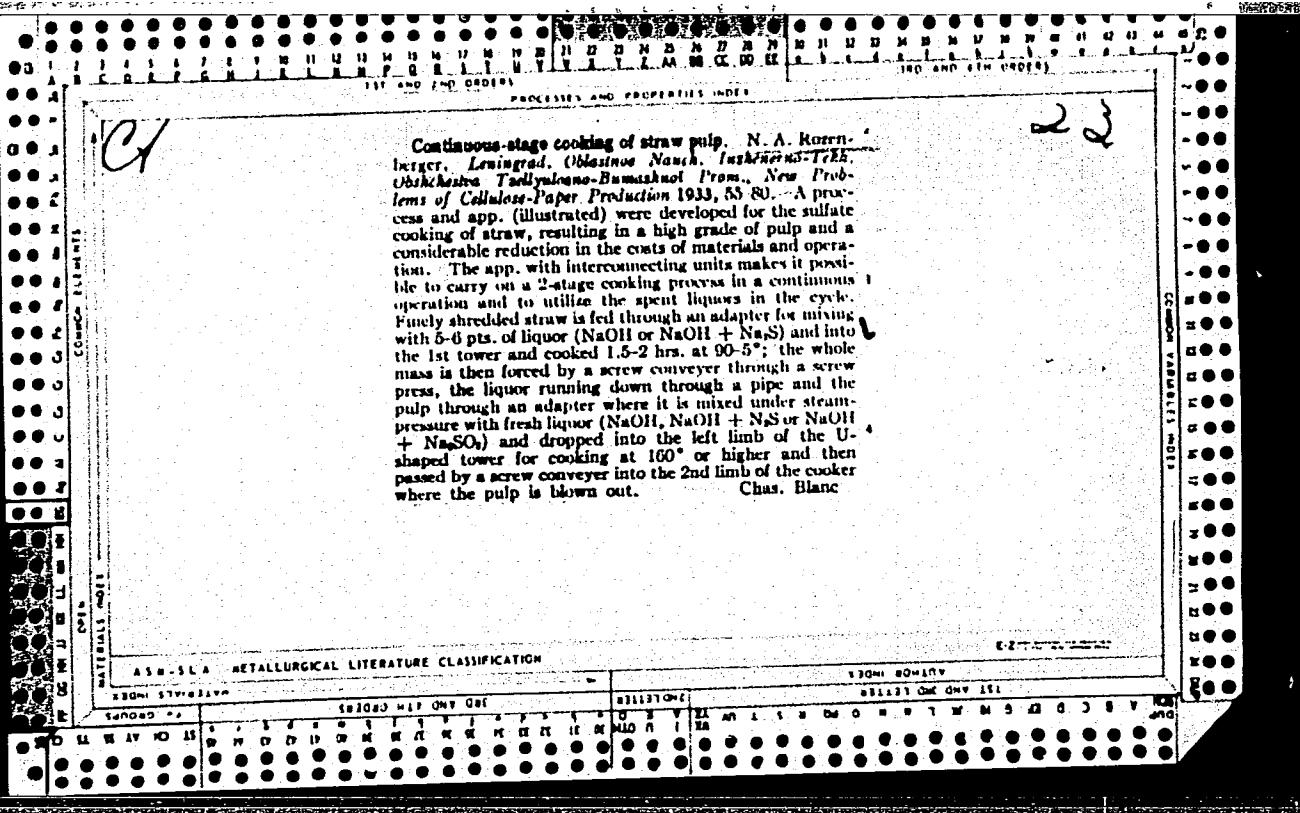
ACCURACY AND PRECISION TESTS

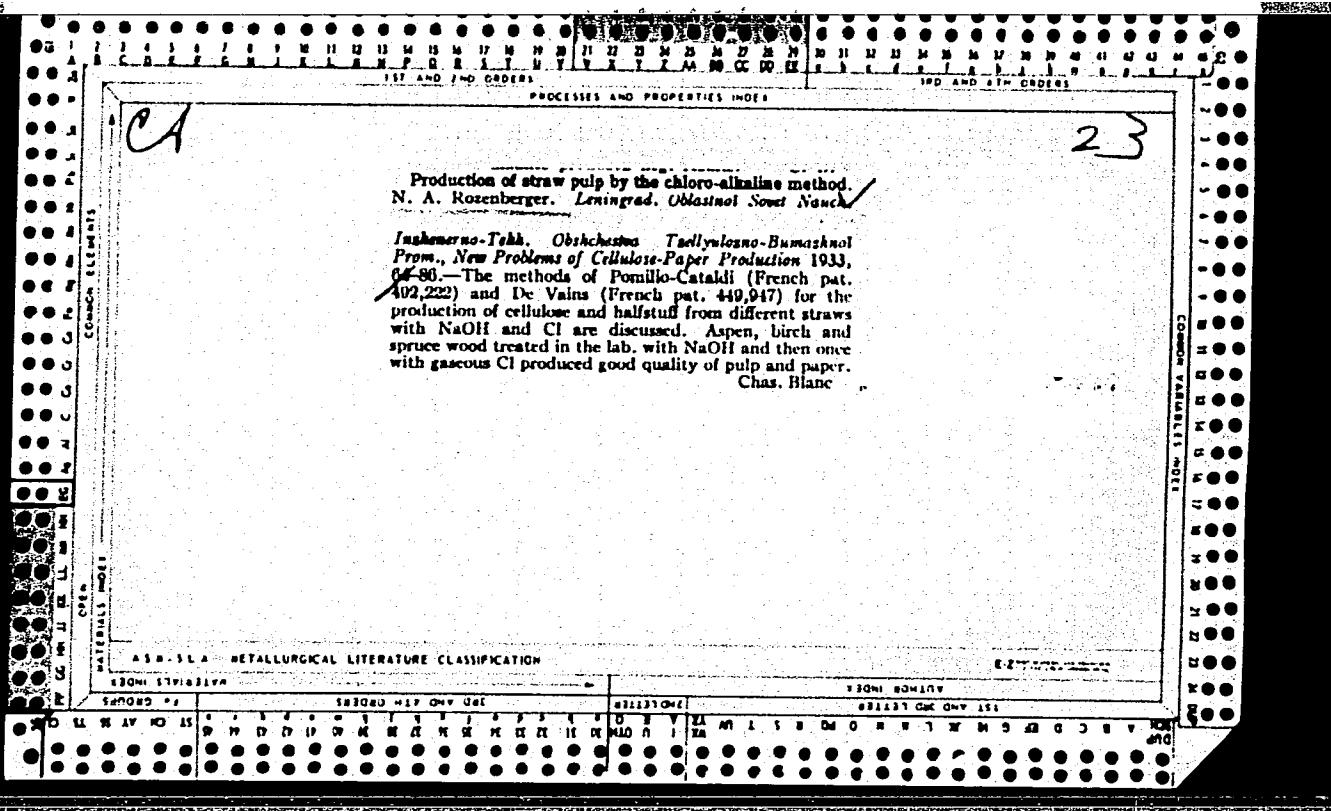
Volumetric determination of pentosans with bromine  
N. A. Rogenberg, B. V. Rabinovich and K. Ya. Freinkel  
*Materials' Vozvashch. Nauch.-Issledovat. Inst. Biologicheskoi Tsellyuloznoi Prom. (Trans. All-Union Sci. Research Inst. Paper Cellulose Ind.)* 1932, No. 1, 100-13.  
Cellulosic pentosans are hydrolyzed to furfural, which is  
then converted to  $\text{CH}_3\text{CH}_2\text{CH}_2\text{C}(\text{H}_2)\text{C}(=\text{O})_2$ . Dissolve 0.5-2 g. of a cellulosic substance, disintegrated and dried to a const. wt., with 12% HCl at 160° until the distillate gives no color with  $\text{PhNH}_2\text{HCl}$ , make up the distillate to 500 cc. with 12% HCl, mix separately 200 cc. of the distillate and 200 cc. of 12% HCl with 25 cc. of 0.1 N  $\text{NaI-NaI}_2\text{O}_4$ , allow to stand 1 hr. in the dark, then add 10 cc. of 10% KI to each mixt., and titrate the sept. I with 0.1 N  $\text{Na}_2\text{S}_2\text{O}_3$ . The difference in  $\text{Na}_2\text{S}_2\text{O}_3$  soln. consumed in the titration of the 2 mixts. when multiplied by 0.0024 gives the value of furfural in 200 cc. of the distillate, from which the pentosans are calcd. by the formula  $(\text{A} - 0.0104) \times 1.8$  (Chemistry of Woods, Hawley and Wise, C. J. 21, 2063). The detn. is made in 1.5 hrs. instead of 2 days, as by the phloroglucinol method, and the uncertainties of the mol. wt., solv., and impurities of phloroglucinol are eliminated. The duplicates produced accurate values that agree with those of the phloroglucinol method within 0.03-0.77% for most materials and 2.2% for spruce, which may be caused by the ppter. by phloroglucinol of other products of hydrolysis together with furfural.

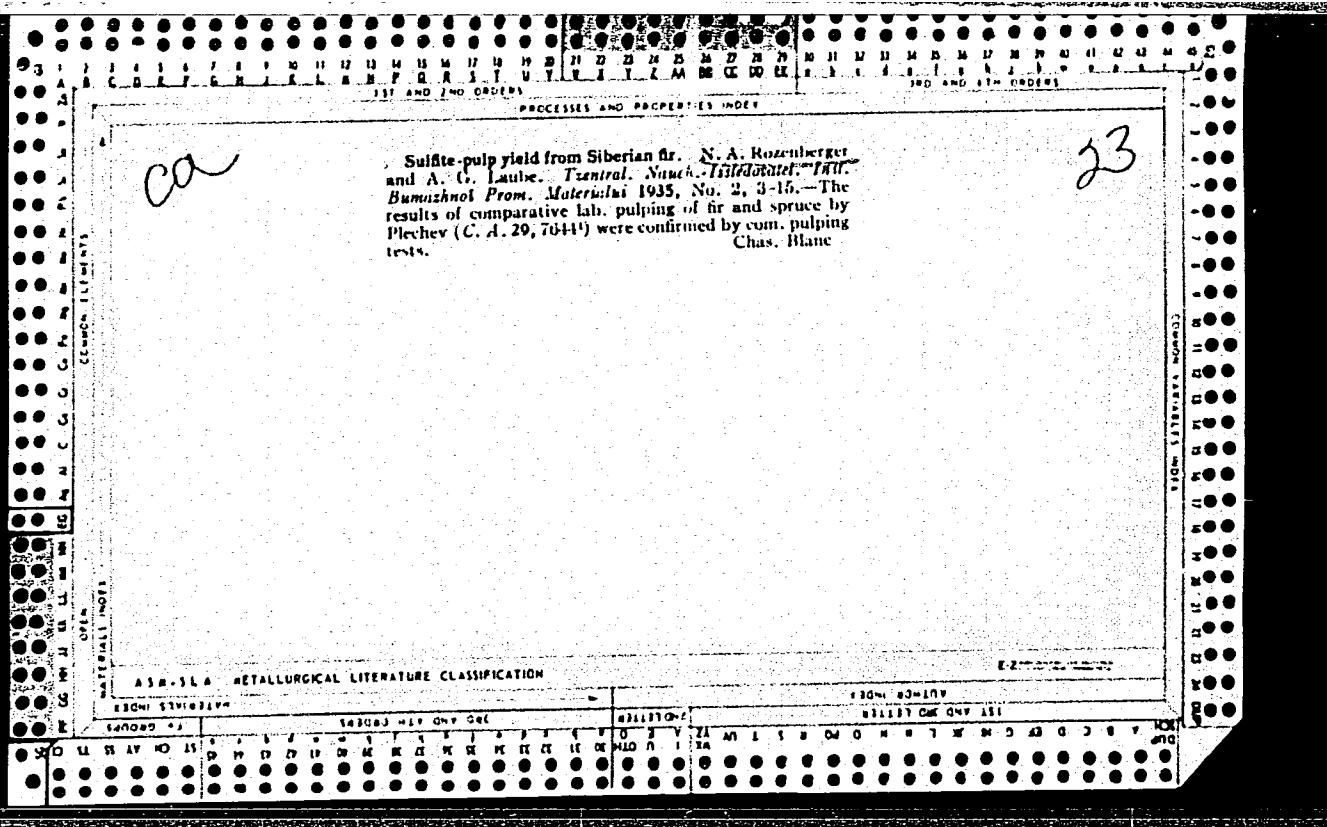
C. B.

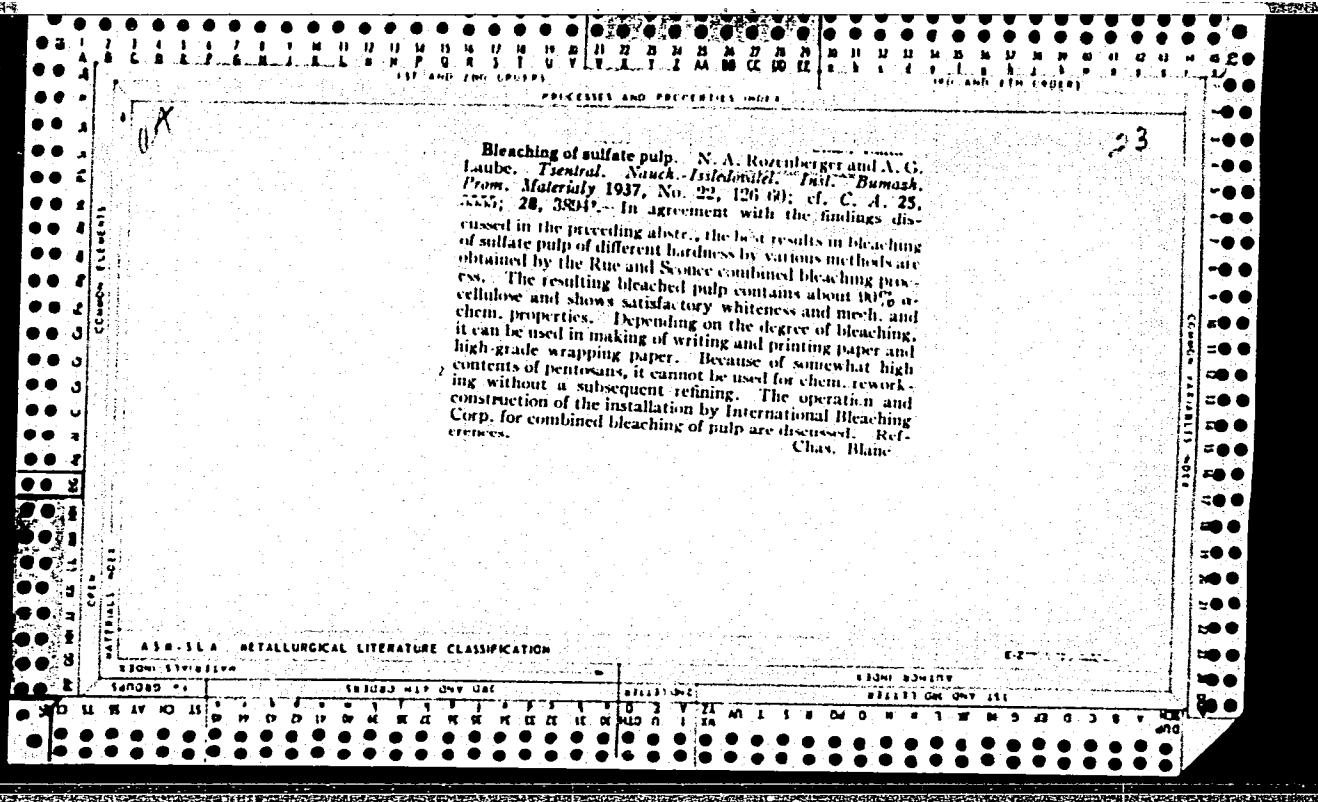










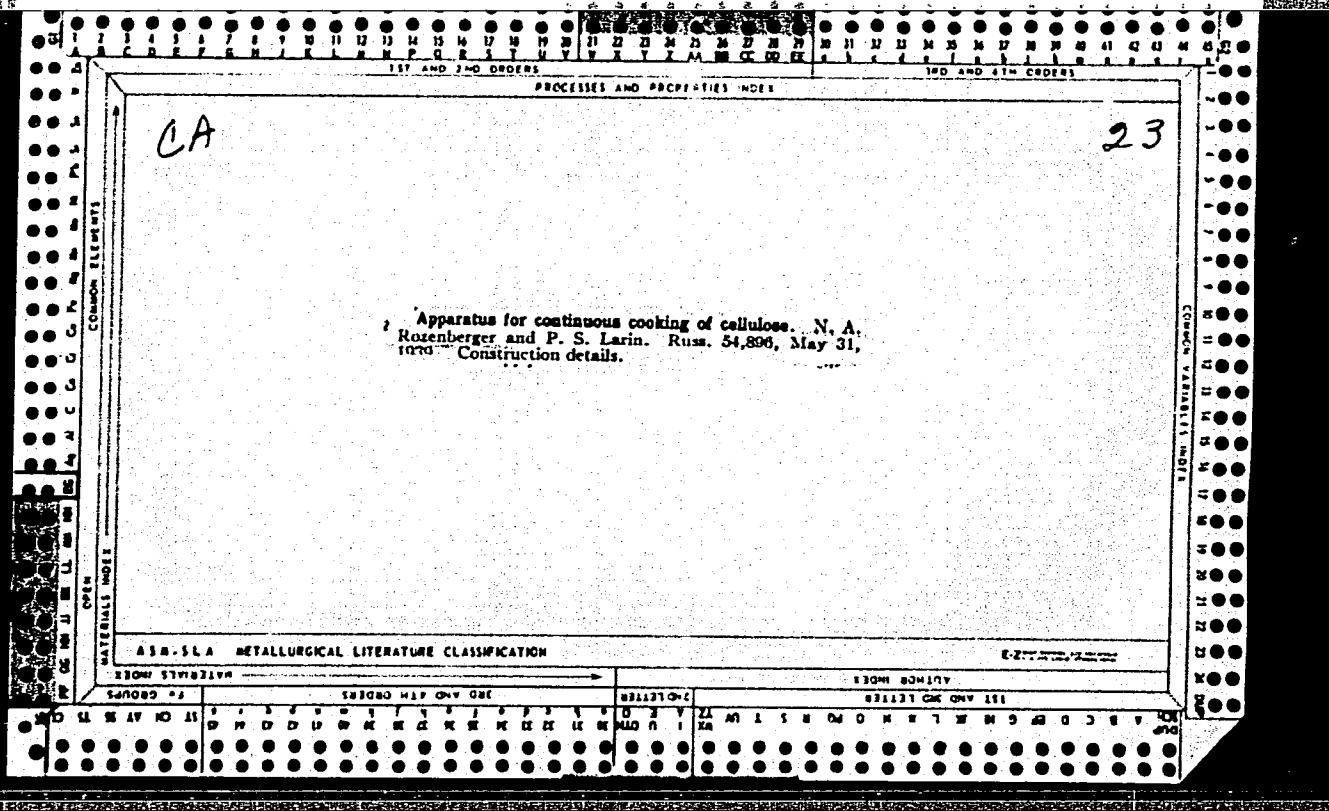


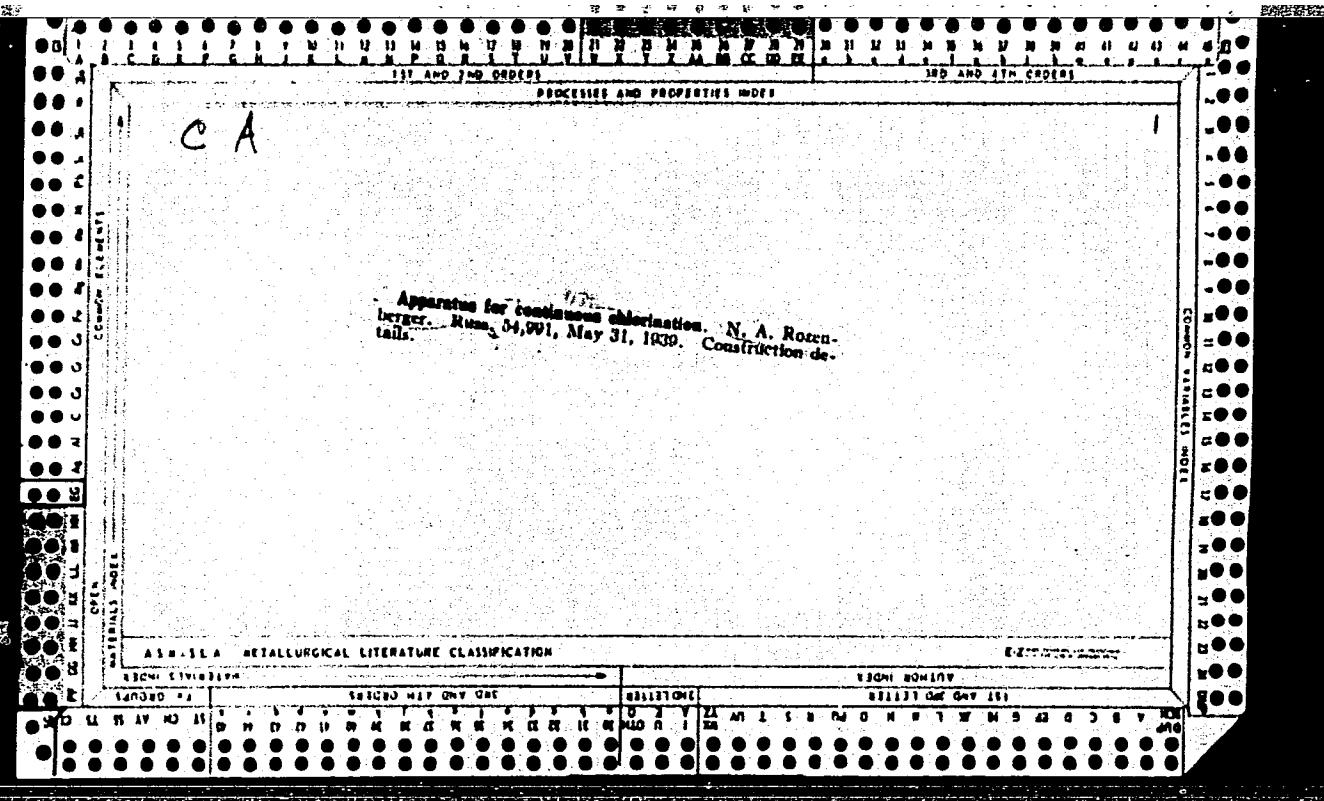
*Clogging of paper-machine screens at the Geroi Truda mill.* N. A. Rozenberger. *Indust. Nauch.-Tekhnich. Inst., Burnesk.-Prom. Materiały* 1937, No. 25, 137-42.  
Tentative improvements in the construction and operation of paper-machine screens are recommended to combat the clogging of screens by the thin, straw-cellulose fibers composed chiefly (70-80%) of sclerenchyma cells.

Chas. Blane

AS-SEA METALLURGICAL LITERATURE CLASSIFICATION

ITEM NUMBER	ARTICLE NUMBER	CLASSIFICATION
140729	29	100-1000
300000	00	100-1000





14

23

Refining of (sulfite and sulfate) pulp. N. A. Rosenberger, *Vestnau-Nauk.-Tekhnichesk. Inst. Rzumash. Prom. Materialy* 1940, No. 20-30, 38-82. --A general discussion of the theory and practice of refining pulp by the methods of cold and hot alk. treatment, flotation and washing with water, based on the literature and foreign practice. Special attention is given to the procedures used in the U. S. A. Extensive bibliography.

Chas. Blane

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

CLASSIFICATION	SEARCHED	INDEXED	FILED	READY	SEARCHED	INDEXED	FILED	READY	SEARCHED	INDEXED	FILED	READY
IRON & STEEL	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

ROZENBERGER, N.A.

Sulfite cellulose from straw. Patent U.S.S.R. 78,360, Dec.31, 1949.  
(CA 47 no.19:10228 '53)

ROZENBERGER, N.A.

Chemistry of the sulfite cooking of spruce. Bumazh. Prom. 28, No.1,  
13-19, No.2, 14-20, No.3, 14-18 '53. (MIRA 6:2)  
(CA 47 no.15:7776 '53)

*ROZENBERGER, N.Y.*

*CH*

Theoretical and practical considerations in the rapid cooking of kraft pulp. N. A. Rozenberger. *Bumazh. Prom.* 29, No. 4, 6-10 (1954).—A no. of variables in kraft cooking were studied. Two samples of pine, I and II, (*Pinus sylvestris*) were used: (110 and 150 years old, total diam. 242 and 168 mm., heartwood diam. 1.65 and 80 mm., and  $\text{Cl}_3\text{CHCH}_2\text{OH}$  exts. 0.52 and 0.12% in the heartwood and 2.02 and 2.44 in the sapwood). II heartwood and sapwood immersed in  $\text{H}_2\text{O}$  absorbed, resp., 35 and 30 cc. in 1 min., 49 and 51 cc. in 10 min., 62 and 73 cc. in 100 min., and 65 and 101 cc. in 1000 min.; immersed in white liquor they absorbed 49 and 48 cc. in 1 min., 63 and 63 cc. in 10 min., 70 and 86 cc. in 100 min., and 83 and 107 cc. in 1000 min. Changes in II heartwood during the temp. rise from 70 to 150° were studied. All cooks were made with 24% active alkali as  $\text{NaOH}$  and 28-0% sulfidity unless otherwise specified. Heating periods were 0, 45, 75, 90, 105, 120, 135, and 160 min. to reach temps. of 70°, 100°, 120°, 130°, 140°, 150°, 160°, and 170°, resp.; pulp yields decreased linearly from 100 to 63.4%, the residual lignin (as a percentage of lignin originally present in the wood) from 100 to 51.0%; and the g.  $\text{NaOH}$  per l. from 40 to 21.7. The effects of time at max. temp. were also studied. By using 2.5 hrs. to attain max. temp. from 70°, the  $\text{KMnO}_4$  nos. of pulp from I heartwood at 180° max. temp. (Björkman no.?) were 135 (at those total pulp yields, given in parentheses) were 135 (44.1%), 120 (42%), and 105 (40.4%) for 0.5, 1, and 1.5 hrs. at max. temp., and for I sapwood were 133 (47.3%), 100 (44.0%), and 100 (43.8%); for a max. temp. of 170°, 100 (44.0%), and 100 (43.8%). The  $\text{KMnO}_4$  nos. for pulp from I heartwood were 138 (48.4%), 127 (43.9%), and 123 (43.3%) for 1, 2, and 3 hrs. at max. temp., and for pulps from I sapwood were 134 (49.0%), 125 (46.6%), and 111 (45%). I (contg. 50% each of sapwood and heartwood) was cooked with 16.8 and 18.4% alkali (as  $\text{Na}_2\text{O}$ ) (III). For a time to max. temp. of 2.5 hrs. and 18.4% III, and total cooking periods of 3.5, 4, 4.5, and

5.5 hrs., the total yields with % screenings given in parentheses were, resp., 45 (4.8%), 40.4 (1%), 44.9 (0%), and 43.7% (0%). For the same cooking times at 16.8% III the values were 37.3 (14.8%), 45 (4.8%), 40.3 (1.8%), and 44.9 (0%), resp. For a time to max. temp. of 1 hr. 20 min. and 18.4% III the values were 41.3 (10%), 41.7 (5.5%), 43.1 (2.8%), and 43% (0%) with total cooking times of 2.5, 3, 3.5, and 4.5 hrs.; at 16.8% III the values were 35.1 (17.5%), 39.3 (11.3%), 41.0 (6.0%), and 43.9 (0.7%), resp. II heartwood was cooked (31.0 g./l.  $\text{Na}_2\text{O}$ ) at 170° for 2 hrs. (A) with linear temp. increase from 70 to 170° in 126 min.; (B) from 70 to 110° in 30 min. and from 110 to 170° in 96 min.; (C) with preliminary steaming at 100° for 45 min. and a rise to 170° in 81 min.; and (D) with a rise from 70 to 110° in 30 min., stand-in at 110° for 45 min., and rise from 110° to 170° within 51 min. The total yield, percentage screenings, and  $\text{KMnO}_4$  nos. were, resp., 40.4, 4.6, and 130 for A; 46.6, 3.5, and 131 for B; 46.7, 3.2, and 131 for C; and 45.8, 4.4, and 120 for D. Three sizes of heartwood chips (22 mm. long) were prep'd.: (E) 10×23 mm. (43 chips per 100 g. bone-dry wood); (F) 3×21 mm. (145

*(over)*

N. A. KOLENKOV, JR.

chips per 100 g. wood); and (G) 2.5×3 mm. (1290 chips per 100 g. wood). The percentage total yield and percentage screenings of pulp from E were, resp., 52.1 and 10.3, from F 43.6 and 2.4; and from G 42.0 and 0. II heartwood was pulped (18.0% active alkali as Na<sub>2</sub>O) in 2 series: (II) temp. rise from 70 to 170° over 2.5 hrs., and (J) rapid rise from 70 to 170°. In series H, for a cooking time at 170° of 1, 2, and 3 hrs., the total yields were 51.5, 47.2, and 44.6%; the percentage screenings 14.0, 4.3, and 1.7%; KMnO<sub>4</sub>, nos. 141, 138, and 130; and pulp viscosities 820, 880, and 700 millipoises, resp. In series J, for a cooking time at 170° of 3 hrs., 4.5 hrs., and 6 hrs., the total yield was 53.1, 49.4, and 48.3; the percentage screenings 25.1, 15.2, and 9.1; KMnO<sub>4</sub>, nos. 132, 131, and 129; and viscosities 770, 570, and 470, resp. II heartwood when impregnated 1 hr. at 100° with white liquor contg. 62.0, 77.5, and 93.0 g./l. active alkali (as Na<sub>2</sub>O), resp., the chips absorbed 15.7, 19.2, and 22.6% active alkali (based on bone-dry wood); on immersion in a heated glycerol bath and cooking 1 hr. at 170° the pulp yields were 51.3, 43.8, and 40.9%; the percentage screenings 5.2, 1.3, and 0.4%; and the KMnO<sub>4</sub>, nos. 142, 123, and 93, resp. II sapwood impregnated with white liquor contg. 62.0, 77.5, and 93 g./l. active alkali, resp., absorbed 17.7, 22.3, and 28.6%, and upon subsequent cooking as above the pulp yields were 49.3%, 45.9%, and 43.2%; the percentage screenings were 0.2, —, and —, and the KMnO<sub>4</sub>, nos. 137, 116, and 85. Cooking curves and operating data are given for 3 Soviet kraft mills. John Lake Keays

ROZENBERGER, N. A.

V Semichemical and higheield pulps. N. A. Rozenberger  
Bunzl, Proc. 29, No. 11, 5-9, No. 12, 6-10, 1956. Summary:  
results of a no. of exp'l. cooks on coniferous (I) (pine and  
spruce and deciduous (II) (birch and aspen) woods are given  
in the form of curves. The active alkali (NaOH) in percent  
percentage over-dry wood) and the resulting total pulp yield in  
percentage screening percentage (length in pulp),  
breaking length in mm, and double folds (?) for pulps from I  
were: 5.78, 7.8, 29, 100, and 26; 10.48, 67, 27, 8200, and  
300, 13, 65, 64, 22; — and —; 16, 62, 59, 10, 6200, and  
1600, 16.5, 60, 51, 16; — and —; 18, 64, 6, 10, 8200,  
and 2100; 20, 50, 3, 9, 8450, and 12100, and 20, 15, 0.8  
— and —; for II corresponding values were 5.50, 80, 20;  
8100, and 220, 10, 70, 1, 9200, and 400; 13, 66, 65, 0;  
— and —; 6, 64, 59, 8, 10300, and 1200, 10, 80, 43;  
7, — and 1200, 18, 58, 17, 9400, and 2100, 20, 6, 7, 1;  
8.00, and 1880, and 25, 49, 3, — and —; pulp is classified  
as semichemical, high yield, or normal depending on whether re-  
spective yields were > 65%, 64-65%, or < 64%.  
In cooking I with Na<sub>2</sub>SO<sub>4</sub>-Na<sub>2</sub>CO<sub>3</sub> (ratios not given) the per-  
centage chemical (based on oven-dry wood) the percentage  
total yield of pulp, breaking length in mm, and double folds (?)  
(?) were 10, 88, 5100, and 40, 18, 80, 5500, and 10, 20, 88;  
6000, and 100, and 25, 87, 7000, and 280, comparable  
values for II were 10, 72, 9000, and 210, 15, 74, 9000, and  
000, 20, 75, 10,000, and 770, and 25, 76, 1,000, and 650.  
In the ad. digestion of I, the time in min., at 170% percentage  
total pulp yield, breaking length in mm, and double folds (?)  
were: 5, 60, 2400, and 4, 10, 90, 3800, and —, 20, 87;  
3200, and —, and 30, 90, 3400, and 18, comparable values  
for II were: 5, 58, 3700, and 4, 10, 50, 5700, and 80, 20, 78;  
8000, and 4200, and 30, 72, 3700, and 700, Mill scale cook-  
ing and cooking of semichemical pulps is reviewed.

John Lake, Knoll

ROZENBERGER, N.A.

~~Producing high yield wood semipulp and pulp. Bum.prom. 29  
no.12:8-12 D '54.~~ (MLRA 8:2)

1. Tsentral'nyy nauchno-issledovatel'skiy institut bumagi.  
(Wood pulp)

NEPENIN, Nikolay Nikolayevich; KOMAROV, F.P., kandidat tekhnicheskikh nauk, retsenzent; SAPOTHITSKIY, S.A., kandidat tekhnicheskikh nauk, retsenzent; ROZEMBERGER, N.A., kandidat tekhnicheskikh nauk, retsenzent; BLOSHTEYN, I.I., inzhener, retsenzent; GRYMAN, A.A., inzhener, retsenzent; ZAMORUYEV, B.M., inzhener, retsenzent; KLOPOV, V.M., redaktor; FEDOROV, V.M., redaktor izdatel'stva; KARASIK, N.P., tekhnicheskiy redaktor

[Technology of woodpulp] Tekhnologija tselliulozy. Moskva, Goslesbumizdat. Vol.1. [Sulfite-cellulose manufacture] Proizvodstvo sul'fitnoi tselliulozy. 1956. 748 p. (MLRA 9:7)  
(Woodpulp)

ROZENBERGER, N. A.

*Math* ✓ The influence of various bases on sulfite pulping. N. A. Rozenberger. *Bumazh. Prom.*, 31, 6-10 (1956).—The effects of various bases on the sulfite pulping of *Picea excelsa* chips (I) were studied with Ca (II) and Na base cooking liquors (III). Samples of I were heated 2 hrs. to 100° and up, to 52 hrs. at 100° in cooking liquor contg. 6.3% total and 0.98% combined SO<sub>3</sub>; the percentage lignin in the pulp (based on the lignin in I) was 71, 50, 28, 16, and 10.8 for II, and 68, 31.3, 13, 7, and 4.0% for III after 10, 22, 34, 46, and 52 hrs. at 100°. The total yields were 80, 73, 63, 57, and 58.3% for II and 78, 63, 57, 54, and 53.8 for III; percentage screenings were 80, 73, 19, 7, and 4.5% for II, and 78, 38, 1, 0, and 0% for III. Pulping started when approx. 50% of the lignin was removed, the crit. lignin value being reached in 22 hrs. with II and in 16 hrs. with III. The % firmly combined S in the residual pulp lignin was 1.34, 3.1, 4.5, 5.4, 6.3, and 8.55 for II and 1.28, 2.9, 4.3, 5.0, 5.7, and—for III after 2, 6, 12, 18, 24, and 32 hrs. at 100°; indicating that the rate of lignin sulfonation was actually somewhat lower with III than with II. The pH of the cooking acids was not appreciably different for the 2 bases during the pulping, and the amt. of cooking acid absorbed by the

chips was the same for II and III. It is assumed that the more rapid delignification obtained with III results from the more rapid soln. of the solid, insol. lignosulfonate and the higher solv. of the sol. lignosulfonate. To verify this assumption, 2 samples of I were heated 2 hrs. to and 8 hrs. at 100° with III and II contg. 6.29% total SO<sub>3</sub> and 0.98% combined; the sulfonated and washed chips (IV) contained 1.31 and 1.48% ash, 26.0 and 26.7% lignin, and 0.80 and

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Rozemberg, N. A.

0.89% S for the III and II, resp.; IV heated 4 hrs. at 115° in an aq. soln. of SO<sub>2</sub> (4.86%) gave 52.3% (for III) and 54.2% (for II), total yield of pulp (Bjorkman nos. 83 and 112), with 0.3 and 15.7% screenings. IV treated 312 hrs. at 20° with 5% HCl and washed in distd. H<sub>2</sub>O gave a deionized, sulfonated wood (V) with 0.05% ash. V heated 4 hrs. at 115° with 4.86% SO<sub>2</sub> soln. gave pulps with 50.9% (for III) and 53.1% (for II) yield, 0.0 and 1.8% screenings, and 61 and 79 Bjorkman no. Samples of I were sulfonated by heating 8 hrs. at 100° with III (6.3% total SO<sub>2</sub> and 1% combined), the IV washed 5 times at 100° with distd. H<sub>2</sub>O and deionized with HCl, the V immersed for several days at 20° in 0.8N solns. of various chlorides, and the ion-exchanged, sulfonated wood (VI) treated 5 times for 1 hr. at 20° with distd. H<sub>2</sub>O and pulped 4 hrs. at 115° in a 4.86% soln. of SO<sub>2</sub>. VI, contg. Na, NH<sub>4</sub>, Mg, Ca, Ba, and H lignosulfonates with 1.59, 1.08, 1.32, 3.03, and 0.08% ash, gave pulps in 49.6, 49.3, 50.4, 50.9, 51.3, and 48.7% yield, 0.0, 0.0, 0.5, 1.6, 2.4, and 0.0% screenings, and 45, 43, 88, 94, 99, and 82 Bjorkman no. VI (Na, Ca, and Ba base) heated 12 hrs. at 115° in dil. H<sub>3</sub>PO<sub>4</sub> soln. (pH 1.9) gave pulps with total yields of 53.6, 71.7, and 73.9%, and 7.1, 71.7, and 73.4% screenings contg. 14.1, 22.5, and 24.3% lignin. VI (Na and Ca base) was heated 7 hrs. at 115° in cooking acid contg. 4.9% total SO<sub>2</sub> and 0.45% combined, the same base being used in the pulping stage as had been used in the ion-exchange stage; total yields were 52.5 and 54.6%, % screenings 0.1 and 7.2%, and Bjorkman nos. 65 and 112.

John Lake Keays

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Subject: pulping of *Pinus sylvestris*. Y. A. ROSEN  
Date: 31. V. 1955 (5 Oct 1958).  
Other than Ca in the pulps of I and II, no other base was studied. I and II were pulped at 10% consistency for 5 hrs. to and 5 hrs. at 15% consistency. Total alkali added: CaO or Na<sub>2</sub>O; the % total alkali, the Bjorkman no., and pulp color for Ca base were 49.2, 10.6, 136°, and light brown; for Na base, corresponding values were 44.6, 6.2, 87°, and light yellow. For Ca base pulp from II were 46.4, 10.6, 43°, and light yellow, and for Na base were 47.1, 6.0, 33°, and light yellow. The color of the base compared with Ca base was similar to sulfite pulp from I, however, the color of the Na base was darker than the sulfite pulp of the I. The pulp from I was  
*Matts*

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For Ca, 40.1, 50.5, and 48.8, the % screenings 0.9, 3.2, 1.7, and 3.7, and the Bjorkman no. 30, 48, 126, and 118. In a similar study comparing Ca and NH<sub>4</sub> bases the effect of varying the combined at various levels of free SO<sub>3</sub> was detd. For I and a % combined of 1.0, 1.33, 1.67, and 2.00, the screenings at 4.0% free SO<sub>3</sub> were 02, 91, 74, and 85% for Ca base and 40, 47, 70, and 77% for NH<sub>4</sub> base; at

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10.0% free SO<sub>2</sub>, corresponding values were 11, 4, 6, and 2.5 for Ca base and 0, 0, 3.5, and 11 for NH<sub>4</sub> base. For the same values of combined the Björkman nos. for 1.0% free and NH<sub>4</sub> base were 72, 78, 97, and 115. The decreased cooking rate with increased combined and const. free SO<sub>2</sub> in the case of Na base pulping is due to the lower ratio of soln. of extracted lignin in the presence of a high content of combined. The increased cooking rate with increased combined and const. free SO<sub>2</sub> in Ca base pulping results from the fact that a considerable part of the Ca is taken out of the cooking acid in the form of insol. salts and an excess of combined (1.5 to 2.0% CaO) has to be used in pulping I. In a study of the effect of impregnation with various salts (100 g./l.) on the sulfite pulping characteristics, I chips were impregnated 5 hrs with various solns. at 120° and then pulped; 6% total SO<sub>2</sub>, 1.75% Na<sub>2</sub>O, 4 hrs. to and 6 hrs. at 140°; the as-blows yield of pulp, the % screenings, and the Björkman no. were 42.1, 4.1, and 135 for no impregnation, 42.7, 0.6, and 47 for impregnation with Na<sub>2</sub>O, 42.5, 0.7, and 52 for impregnation with Na<sub>2</sub>HPO<sub>4</sub>, and 42.5, 2.1, and 72 for impregnation with Na<sub>2</sub>CO<sub>3</sub>. Pulp obtained with the latter salt had a high content of lignin.

I chips were impregnated 5 hrs with 100 g./l. of NH<sub>4</sub>NO<sub>3</sub> at 120° 40° SH and then pulped 6% total SO<sub>2</sub>, 1.75% Na<sub>2</sub>O, 4 hrs. to and 6 hrs. at 140°; the as-blows yield of pulp, the % screenings, and the Björkman no. were 42.1, 4.1, and 135 for no impregnation, 42.7, 0.6, and 47 for impregnation with 100 g./l. of NH<sub>4</sub>HSO<sub>4</sub> (3.5% total SO<sub>2</sub>) or 100 g./l. standard sulfite cooking acid, giving pulps ranging from 52 to 107 Björkman with a low % screenings and a low lignin content; in practice the process would be quite difficult to control because of differences in impregnation rates for I and I-sapwood. I chips 22 mm. long and 3 mm. thick were impregnated with solns. of (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> or NH<sub>4</sub>HSO<sub>4</sub>.

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concen. of total SO<sub>2</sub> 6.2%, and ratio of sulfite salts to bone-dry wt. of wood (caled. on a basis of SO<sub>2</sub>) 44%; at the end of the 1st stage the unabsorbed impregnation soln. (75% of the original soln.) was drained off and replaced with a 7.3%

soln. of SO<sub>2</sub>, and the pulping stage completed by heating the impregnated chips 3.5 hrs. at 130°. For the following conditions in the 1st stage: impregnation with (NH<sub>4</sub>)<sub>2</sub>SO<sub>3</sub> at pH 7.7, 6 hrs. at 100°, and with NH<sub>4</sub>HSO<sub>3</sub> at pH 4.1, 40 hrs. at 20°, 6 hrs. at 130°, and 2 hrs. at 160°, the % yield of residue after the 1st stage was 93.0, 93.5, 85.0, and 54.0; the % lignin content 27.6, 28.6, 25.7, and 11.6, the % S in the lignin 2.3, 0.4, 8.5, and 5.9; the % yield after the 2nd stage 62.3, 64.1, 45.8, and 43.9, the % screenings in the final pulp 43.5, 25.5, 0.3, and 0.0, the Björkman no. in the final pulp 142, 142, 71, and 32, and the pulp color dark yellow, light brown, light yellow, and white. The pulp obtained by impregnation for 2 hrs. at 160° followed by pulping with aq. SO<sub>2</sub> at 130° was comparable to II sulfite. Results similar to those given above were obtained with Na instead of NH<sub>4</sub> base in the impregnation stage. The requirements for a high quality sulfite pulp from I are as follows: a high ratio of NaHSO<sub>3</sub> to wood and a high temp. (160°) in the 1st or impregnation stage, and a low temp. (130°) and a fairly high concn. of SO<sub>2</sub> (7%) in the 2nd stage. Various recovery

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IM

BOZENHUBER, N. A.

Kesting method for the production of chlorine dioxide. (From  
"Svensk Papperstidning" no.16, 1954, "Das Papier" no. 9/10.  
1952). Bum. prom. 31 no.7:27-28 J1 '56. (MLRA 9:10)

(Sweden--Chlorine industry) (Bleaching agents)

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Sulfite pine woodpulp (from "Paperi ja puu," no.8, 1955, "Svensk  
Papperstidning," no.19, 1955, "Paper Trade Journal," no.42, 1955).  
Abstracted by N.A.Rozemberger. Bum.prom.31 no.12:25-26 D '56.  
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(Woodpulp industry)

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My '57. (MLRA 10:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut tsellyuloznay i  
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1. TSentral'nyy nauchno-issledovatel'skiy institut tsellyuloznoy i  
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(Lignosulfonic acids) (Woodpulp)

COMMUNIST / Chemical Technology, Chemical Products  
CHINA and Their Application, Part 4. - Cellulose  
and Its Derivatives, Paper.

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 63069.

Author : N. A. Rozenberger.

Inst : Not given.

Title : Upon The Different Solubility of Solid Ligno-  
sulfonates in The Sulfite Pulping Process.

Orig Pub: Tszaochzhi gun-e, 1958, No 2, 20 - 23, 43.

Abstract: Translation. See RZhKhim., 1958, 34619.

Card 1/1

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ROZENBERGER, N.A.; NAUMOV, V.V.

Basic trends in the development of the production of fibrous intermediate products. Bum. prom. 36 no.9:4-7 S '61. (MIRA 15:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsellyuloznobumazhnay promyshlennosti.  
(Cellulose) (Paper industry)

CZECHOSLOVAKIA  
28 Jun 66

CABAL, Stefan, member, Slovak Trade Union Council  
LOSKA, Vojtech, member, Slovak Trade Union Council  
ROZENBERGER, Pavel, candidate member, Slovak Trade  
Union Council

The above trade union functionaries asked to be  
relieved from their functions in the Slovak Trade  
Union Council, Bratislava, 28 June.

Praca, Bratislava, 29 Jun 66, p 1.

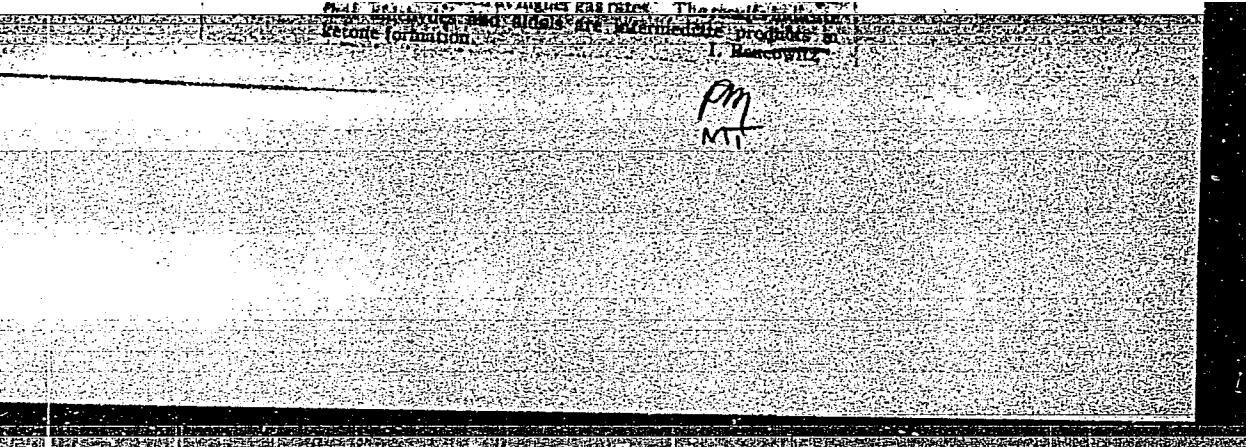
(3)

Rozemerg - Mareshov, N.A.

Ca-catalyzed reaction  
of catalytic amounts of  
terephthalic acid.

At higher temperatures, the proportion  
of ketones increased rapidly. The yield of symmetrical diiso-  
Bu-ketone and of unsymmetrical iso-Bu-iso-Bu  
ketone at 42°C reached a total of 41.2%. The max. yield  
(23%) of the unsymmetrical ketone was obtained at 42°C  
with  $\alpha = 1.1$ . The yield of

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445610015-4



APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001445610015-4"

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Catalytic conversion of iso-structural primary alcohol mixtures into ketones. Zhur.prikl.khim. 30 no.2:286-292 F '57. (MLRA 10:5)  
(Ketones) (Isobutyl alcohol) (Isoamyl alcohol)

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Ye.S., red.; KARABILLOVA, S.F., tekhn.red.

[Suggestions of efficiency experts on wire-broadcasting networks  
and electric communications within districts] Ratsionalizatorskie  
predlozheniya po vnutriraionnoi elektrosviazi i radiofikatsii.  
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ROZEMBERGS, J. Some interpretation problems of the word boyar in Latvian folks songs.  
p. 4c

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February 1959, Unclass.

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## PHASE I BOOK EXPLOITATION

SOY/5055  
Vsesoyuznaya konferentsiya po tret'yu i iznosu v mashinakh. 3d.  
1958.

Otdrodnasicheskaya teoriya smazki. Opery so sluchayna smazki.  
Izmerochnye materialy (hydrodynamic theory of lubrication,  
Slip Bearings, Lubrication and Lubricant Materials). Moscow,  
Izd-vo AN SSSR, 422 p., Errata slip inserted. 3,000 copies,  
printed. (Soviet Inst. Trudy, v. 3)

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya.  
Reports for the Section "Hydrodynamic Theory of Lubrication  
and Slip Bearings"; Ye. M. Gur'yan, Professor, Doctor of Technical  
Sciences, and A. K. D'yachkov, Professor, Doctor of Technical  
Sciences; Rep. Ed. for the Section "Lubrication and Lubricant  
Materials"; G. V. Vinogradov, Professor, Doctor of Chemical  
Sciences; Ed. for Publishing House: M. Ya. Klebanov  
Tech. Ed.: O. M. Gus'kova.

PURPOSE: This collection of articles is intended for practicing  
engineers and research scientists.

COVERAGI: The collection published by the Institut mashinovo  
vedeniya AN SSSR (Institute of Science of Machines Academy  
of Sciences USSR) contains papers presented at the III  
Vsesoyuznaya konferentsiya po tret'yu i iznosu v mashinakh  
(Third All-Union Conference on Friction and Wear in Machines)  
(which was held April 9-15, 1958). Problems discussed were in  
the field of friction and wear in machines, their  
manufacture and application.

Hydrodynamic Theory (Cont.) SOY/5055

Reports Not Reviewed in Publications  
Rozemberg, Yu. A. Mechanical Testing of Lubricating  
Oils 409

Recommendations of the Third All-Union Conference on  
Friction and Wear in Machines [April 9-15, 1958] 410

Data on the Conference 418

Alphabetical List of Authors 419

AVAILABLE: Library or Congress

Comments are mentioned in the text. Not reviewed in publications  
of the articles.

Duvalov, N. Investigation of Friction Processes in

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AC/AF/70  
5/28/61

15.6000

S/028/60/000/012/007/007  
B027/B058

AUTHOR: Rozenberg Yu. A.

TITLE: Method of Determining the Wear-inhibiting Properties  
of Lubricating Oils

PERIODICAL: Standartizatsiya, 1960, No. 12, pp. 43-45

TEXT: POCT 9490-60 (GOST 9490-60): Lubricating Oils. Method for the  
Determination of the Wear-inhibiting Properties on the Four-ball  
Apparatus. Valid From January 1, 1961 to January 1, 1963. The present  
standardization of lubricating oils according to their physical and  
chemical properties is not sufficient to determine their behavior under  
operational conditions. The first national standard for the determination  
of the wear-inhibiting properties of lubricating oils was therefore  
elaborated by the Vsesoyuznyy nauchno-issledovatel'skiy institut po  
pererabotke nefti (VNII NP) (All-Union Scientific Research Institute  
for the Processing of Petroleum). This standard specifies the testing  
of lubricating oils on the four-ball apparatus from two points of view:  
1) Welding load  $P_w$  at which the effect of the lubricating oil in the

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